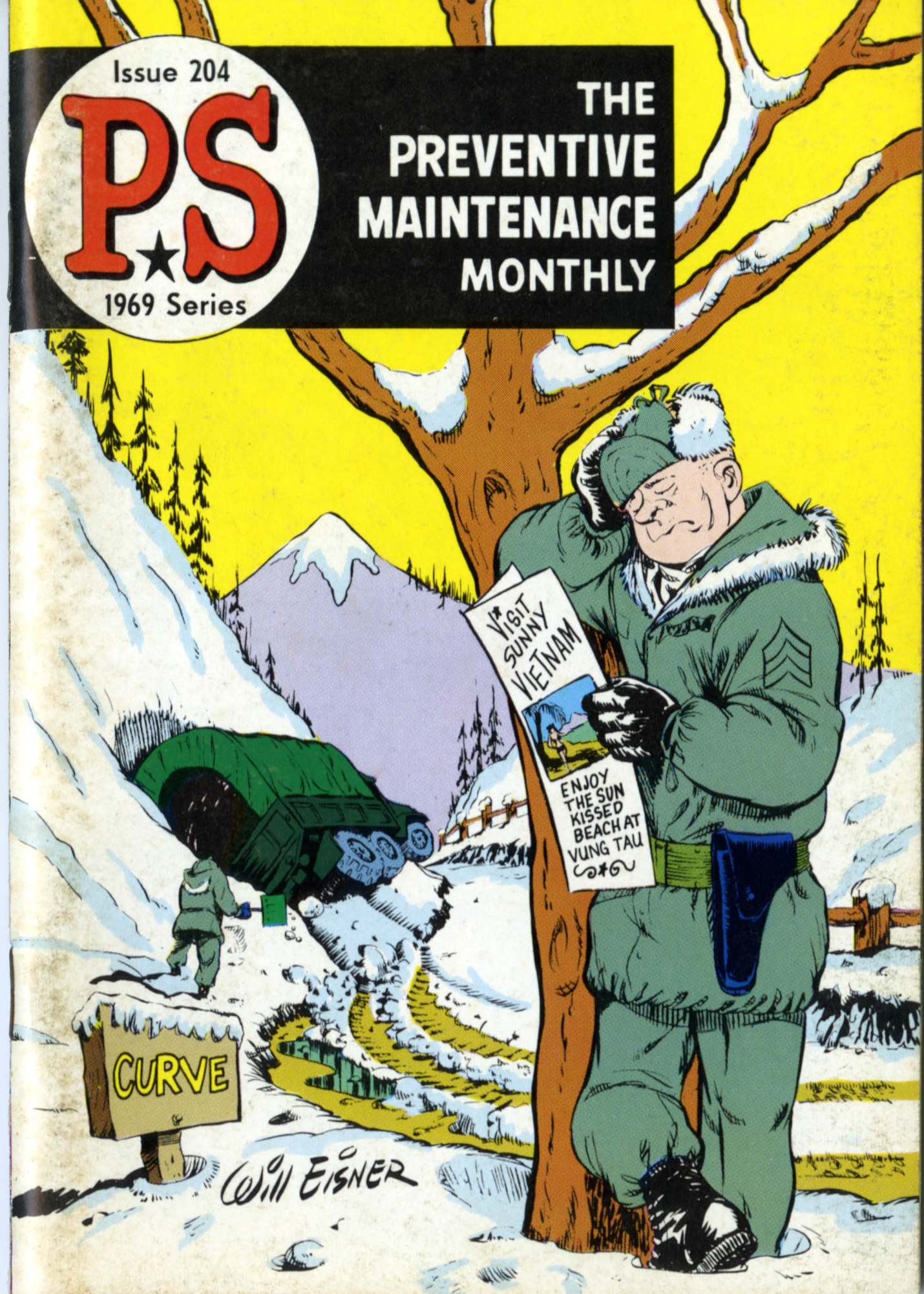
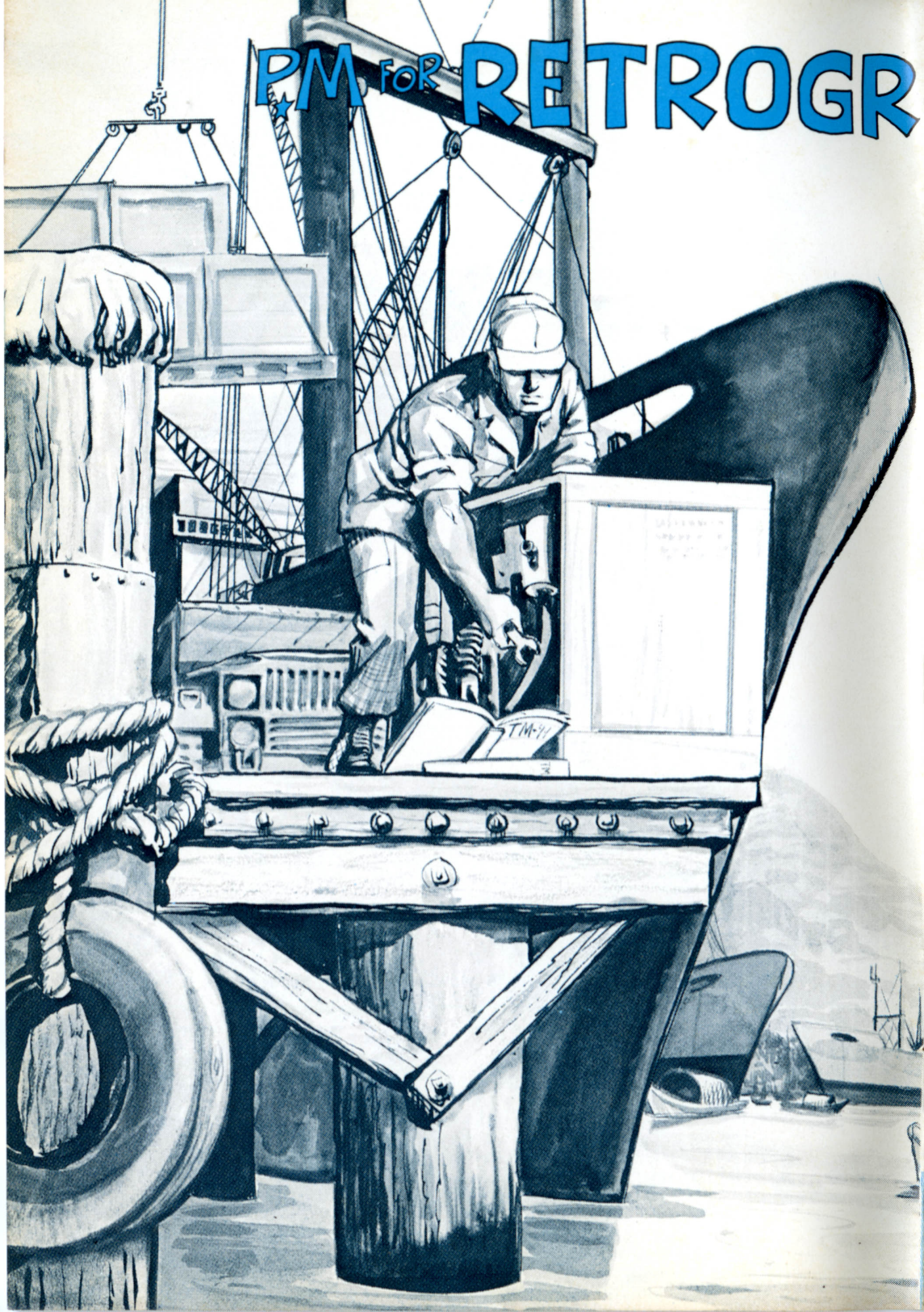
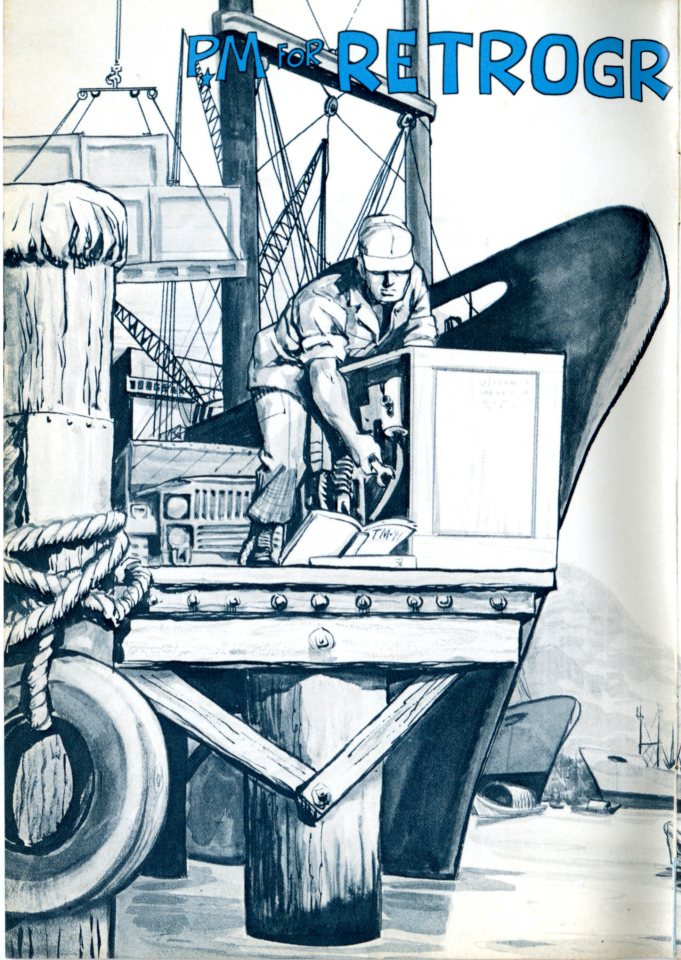

Issue 204
P.S
1969 Series
THE PREVENTIVE MAINTENANCE MONTHLY
VISIT SUNNY VIETNAM
ENJOY THE SUN KISSED BEACH AT VUNG TAU
CURVE
Will Eisner


PM FOR RETROGR
TM-11

PM for RETROGRADE



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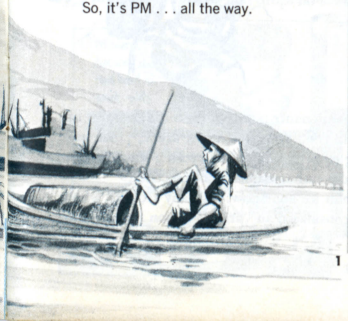
Now, retrograde movement of your equipment does not mean PM comes to a screeching halt. Far from it. As long as you are with your equipment, you've got Preventive Maintenance to do to keep it in good shape.

In the event your equipment is to be turned in for packing up and shipping back, you keep your PM up to snuff till your support unit takes it. You might even be called on to help prepare your gear for shipment. And this gets mighty important, 'cause there's a lot of salty water between where you are and where the gear is going.

You'll get the word on how to clean your gear, what kinds of preservatives, packaging material, boxes and the like to use in packing it. Every item has to be marked and identified . . . with FSN, nomenclature, quantity and unit of issue, where it can be read loud and clear. That way the equipment can be identified and made ready for use when it gets to where it's going.

So, it's PM . . . all the way.



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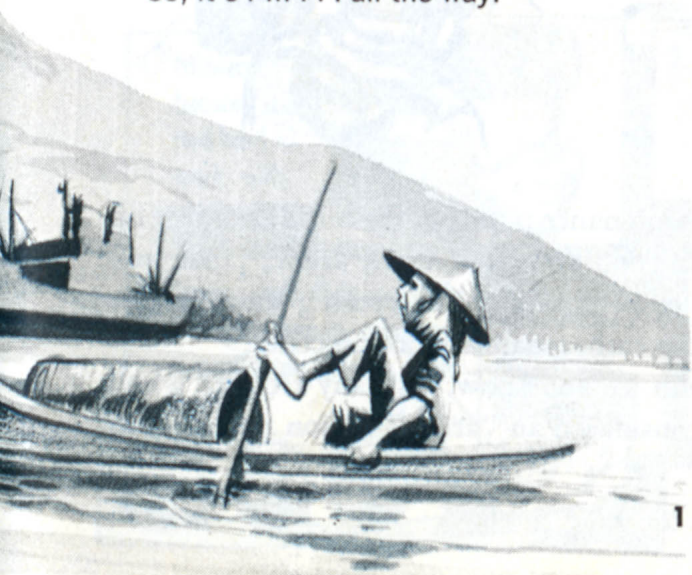

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When the subject of cold-weather maintenance pops up, the mind conjures up visions of places that have extreme cold conditions — like the arctic, polar and sub-arctic areas. But, fact of the matter is, any area that has freezing temperatures and snow becomes a candidate for cold-weather maintenance practices.

Nothing frosts equipment quicker than ice and snow. Ask any trooper who's doing a hitch in a location that's not considered an "arctic" region but still has temperature drops down to −10° F.

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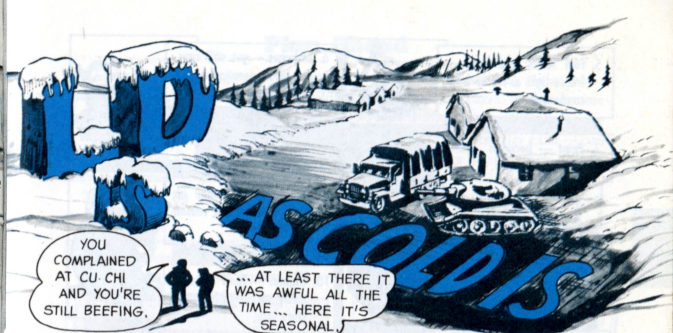
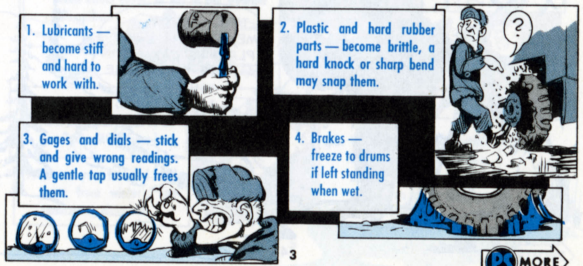


It's usually taken for granted that equipment in areas that dip to −10° F can get along with just ordinary care. Don't believe it! Your equipment can be stopped cold when hit with zero temperatures, blankets of snow and freezing sludge. There's only one way to ease the freeze and stay ahead of a frigid catastrophe . . . put special heat on your PM.

Zero Weather Effects

Winter weather between 0° and −10° F is on the inner fringe of the specialized maintenance treatment required by your TM's and the various winterization manuals. At these temperatures many of the cold weather conditions exist. Maybe not for long periods like in the "arctic" regions but long enough to be just as destructive and deadly to your equipment. That's why you have to adopt some of the operating and maintenance techniques spelled out in the cold-weather manuals.

In general, weather that drops no lower than −10° F has these effects:



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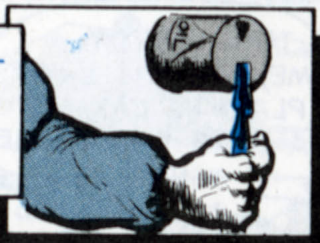
1. Lubricants — become stiff and hard to work with.



2. Plastic and hard rubber parts — become brittle, a hard knock or sharp bend may snap them.

3. Gages and dials — stick and give wrong readings. A gentle tap usually frees them.

4. Brakes — freeze to drums if left standing when wet.

PS MORE

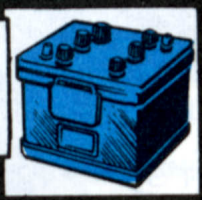
5. Fuel tanks and lines — freeze tight or ice up from condensation.

6. Linkages — get stiff causing hard operation or delayed response.

7. Paint — becomes brittle and cracks easily.

8. Crankcases — sludge up from condensation caused by short runs.

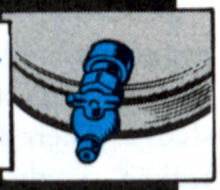
9. Batteries — efficiency is cut, they freeze and crack when discharged.



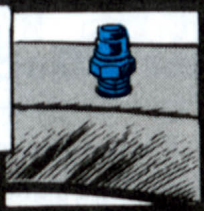
10. Engines — hard to start, many are ruined by hydrostatic lock.

11. Machined surfaces — rust and corrode quickly.

12. Drain cocks and plugs — freeze tight discouraging daily or periodic draining.



13. Power train breathers and vents — clog and freeze closed from slush.



14. Windshields — crack easily when hit by a blast of hot air when being defrosted.

15. Personnel efficiency — gets lousy.

16. Time — "ordinary" services take longer to do.

Plan Ahead

As you can see, trying to get through a cold winter with ordinary maintenance just won't cut it . . . operating in the cold calls for something extra. And that something starts with good maintenance habits.

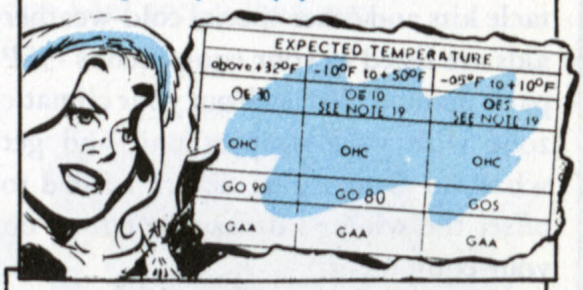
This is simply orienting yourself for conditions that will actually exist — conditions that can frustrate the best mechanics and operators in any crack outfit if they're not ready to meet the hazards head on.

To start off on the right track, adopt, use and stick with these basic zero weather rules:

1. Be acquainted with the Cold-Weather Operation portion of your operator's TM.

> **51. Extreme Cold-Weather Maintenance Problems**
>
> a. The time required to warm up a vehicle so that it is operable at temperatures as low as -50°F. may approach two hours. Vehicles in poor mechanical condition probably will not start at all, or only after many hours of laborious maintenance and heating. Complete

2. Lubricate according to the temperature range on your equipment's LO.



3. Arm your outfit with the necessary special winterization equipment that's authorized for the average temperature range of your area. Area climatic conditions are determined by the average temperature range of the season's coldest month.

4. Keep your extreme cold-weather TM's, TB's, FM's and other cold-weather pubs within reach for quick reference. Look 'em over before the cold blast hits to offset any trouble due to lack of know-how.

5. Keep vital spots or portions of your equipment under cover, or out of the weather altogether.

6. Always remember . . . you're working under unusual conditions so give your equipment that type of attention and service.

7. Try no short cuts, alterations or repairs that're beyond your MOS know-how.

8. Never force a cold, stiff or frozen piece of equipment.

9. Protect your fuel and lubricants from winter's contaminating elements.

10. When in doubt whether winterization treatments apply, check with someone who knows before skipping the therapy.

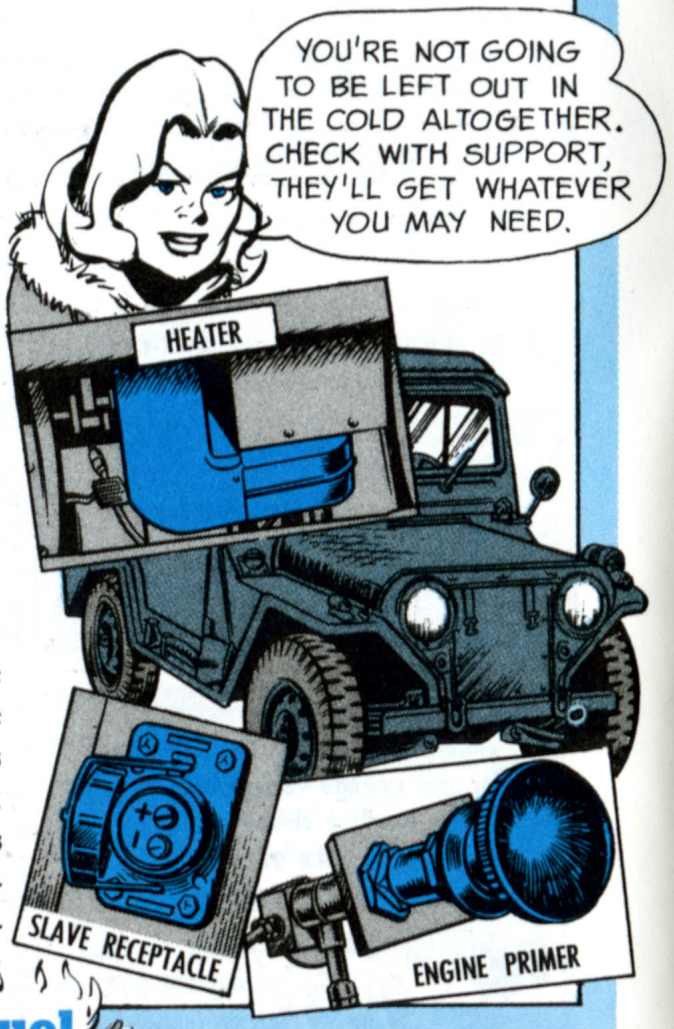
P.S MORE

Special Winter Equipment

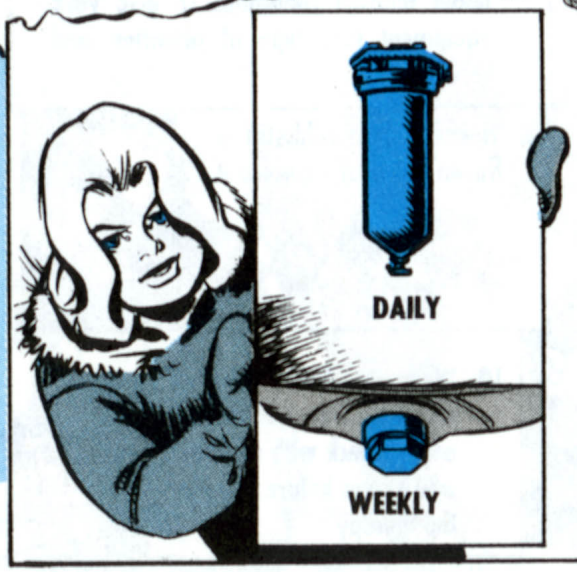
Outfits wintering in the +5° to −10° F temperature zones are entitled to some help too. The authorization for heaters, closure kits and cold-weather starting aids—including the M40 Starting Kit—is given in SB 9-16 (Feb 65).

Assemblies like personnel heaters, closure kits, primer pumps, slave receptacle kits and other special cold-weather aids are listed in your equipment's -35P parts manual. So check out your climatic zone with your support unit and get whatever winter aids that're needed to offset the winter's damaging effects on your equipment.

Tire chains for tactical vehicles are listed in TM 9-2300-223-20P. The swivel-type hook for securing cross chains is listed in TB 9-2300-282-12 (Nov 65). Chains are not usually items of initial issue—they have to be requisitioned when your local weather conditions require 'em.



Fuel



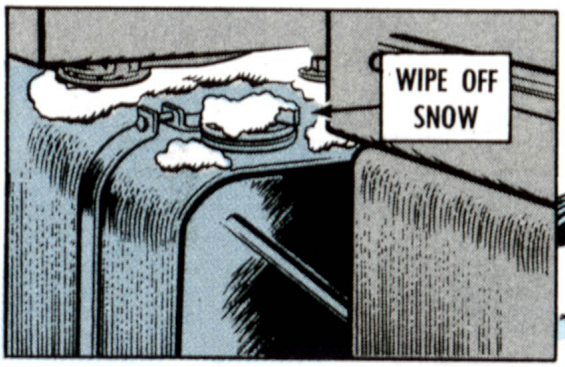
All fuel—gasoline and diesel—should get a dose of alcohol to prevent freezing. Once water freezes in your fuel lines, fuel pump or filter it's no-go. Keeping water out of fuel's not easy—much of it comes from condensation. The best you can do is to keep the water to a minimum by draining the filters daily, and the fuel tank weekly. Then saturate the rest with alcohol.

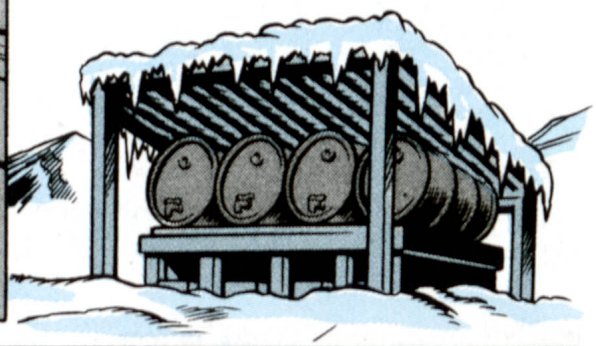
Use 1/2-pint of denatured alcohol for every 10 gallons of fuel. And use Grade III, Fed. O-E-760B. FSN 6810-543-7415 gets 1-gallon, FSN 6810-201-0907 gets 5 gallons, and FSN 6810-201-0904 gets 55 gallons.

Always pour the alcohol on top of the fuel. It mixes better that way.

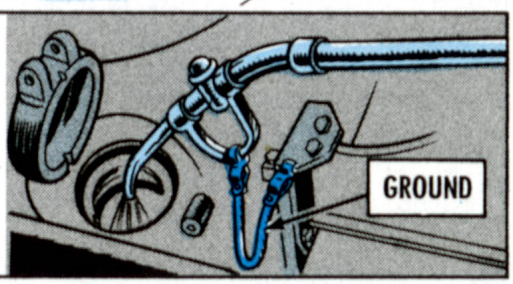
Extra effort should be taken to wipe away snow or ice from fuel tank filler openings, filler cans and hose nozzles before refueling.

Bulk fuel containers should be stored with their openings tight or protected. And keep open cans under cover. A little care here goes a long way.





In cold weather, static electricity is easily generated—so make certain all your filler nozzles are grounded before pumping any fuel. And keep fuel tanks full to hold down the condensation.



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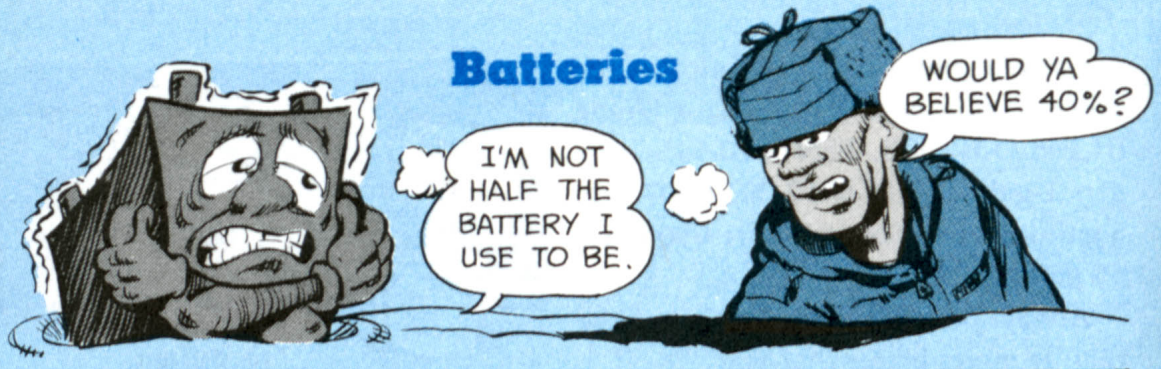
Batteries

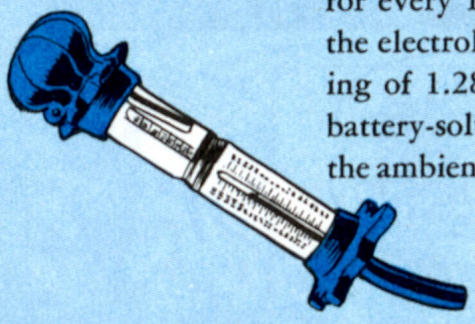


Keeping a battery at its peak efficiency and charge in zero weather is as easy as getting a date with Racquel Welch. You've got to watch its specific gravity like a hawk. Even at its best a battery has only 40 per cent of its cranking ability when fully charged. And at zero temperature it'll freeze and break when reading 1.160.

Electrolyte Reading (Corrected to 80°F)	Freezing Point (°F)
1.280	−90°
1.250	−62°
1.200	−16°
1.150	+ 5°
1.100	+19°

If your vehicle is not putting on enough miles to keep the battery charged up, you'll have to keep switching batteries and get 'em charged by your shop. Before adding water to a battery be sure you're going on a long haul to give it a chance to mix with the electrolyte . . . it'll need about an hour's running time. Never add water to a cold battery. Add it only if the battery's ready to be charged or when the electrolyte's about +40° F, if the battery is to be left standing.

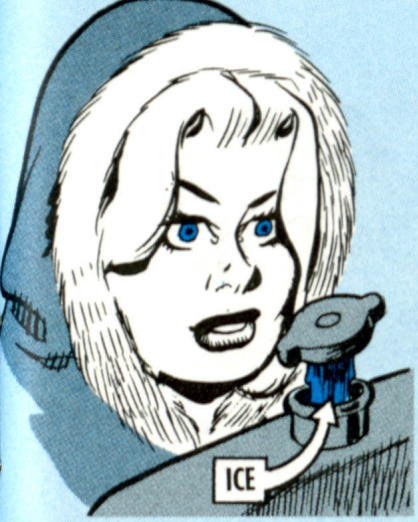
If a battery freezes, get it indoors and let it thaw out slowly. And anybody who thaws out a battery with a torch or open flame is off his rocker—it can blow like a grenade.



Another thing. When checking its gravity, subtract 4 points for every 10° the electrolyte is below 80° F. For example, if the electrolyte's temperature is 0° F, and you get a float reading of 1.280, the actual charge is 1.248. Remember it's the battery-solution (electrolyte) temperature that counts—not the ambient temperature.

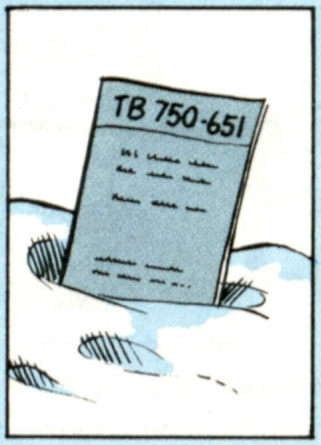
For the whole rundown on battery care read your copy of TM 9-6140-200-15, Storage Batteries, Lead Acid Type. It may not be fun but you will be a walking authority on batteries. And that's not to be slighted.

Dry-cell batteries are very finicky . . . the colder they are the less they put out. So keep 'em warm until ready to use. If you're not using cold-weather dry-cell batteries (those in the 2000-series) see your support about getting some. They have a lot more oomph in zero weather.



Cooling Systems

Your bible for antifreeze for liquid cooling systems is TB 750-651 (Nov 68). It spells out procedures for cleaning and conditioning cooling systems and gives the type and amount of antifreeze needed for various degrees of protection. This TB applies to all Army equipment.



To make certain your cooling system protection is OK, check its antifreeze content against this general guide:

Protection Desired	Pints of Ethylene Glycol needed in each gallon of water.
+20°F	1½
+10°F	2
0°F	2¾
−10°F	3¼
−20°F	3½
−30°F	4
−40°F	4¼

Don't forget to include 6 ounces of corrosion inhibitor, FSN 6850-753-4967, to each 12 quarts (3 gallons) of water in your cooling system. Do not pour unmixed powder directly into the radiator; dissolve it in hot water first, then add it. The powder can cake in the radiator cores and cause clogging.

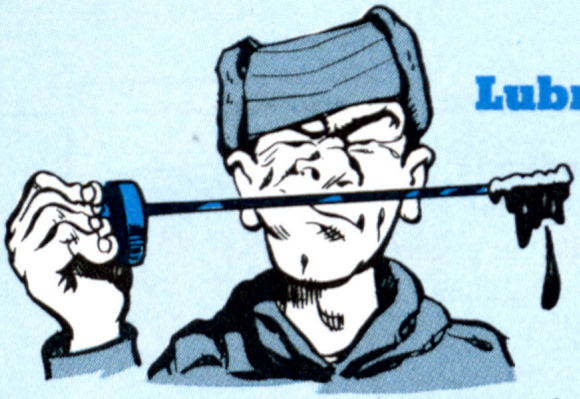
MIX IT IN HOT WATER FIRST

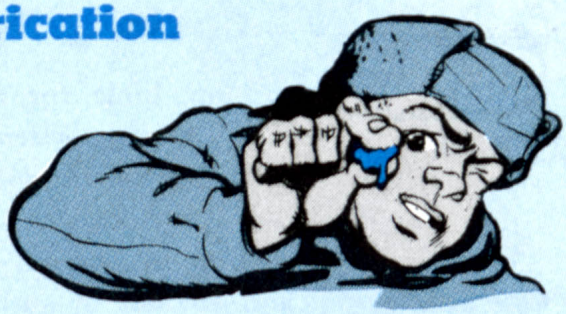
For good operation, a cooling system should heat up to 160° to 180° F regardless of the cold weather. If it doesn't, have the engine's thermostat checked; it could be stuck open and need replacing. Cooling systems that constantly go over 200° also need attention. Again it could be a bad thermostat, a clogged radiator, a bad radiator cap or filthy coolant. Or maybe the flow of air is blocked.

Air cooled systems don't need too much attention. All they need is a good flow of air with all the air-flow shrouds in place. To speed up heating in zero weather, you can partially cover the air intake grills with canvas when starting. Just be sure to remove it after the engine reaches operating temperature.

PS MORE

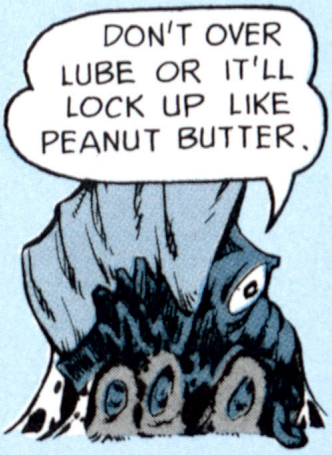
Lubrication





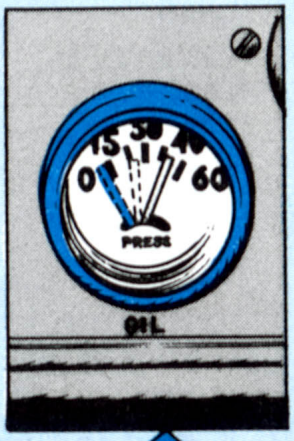
Crankcase oil can go to pot much quicker in winter and may need changing oftener than the LO specifies. Sludge from condensation and dilution from fuel are the main reasons. After every daily oil-level check, use your nose to sniff out fuel contamination by smelling the dipstick. And use your eyes and fingers to detect sludge. Moisture dilution is hard to detect unless it's really bad. If you suspect it, draw a sample and let it stand in a glass jar. Water will show by separating from the oil.

When contamination is found change the oil and oil filters.

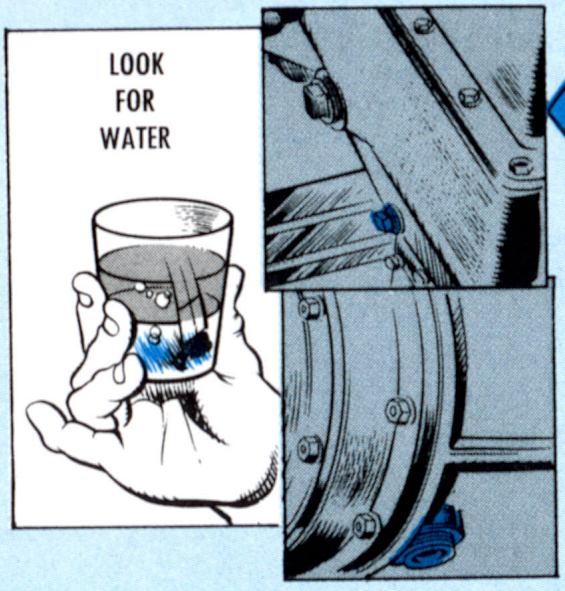


If you're using OES, check your level often because an engine will consume more OES than OE. Keep an eye on the oil-pressure gage; a drop can indicate low oil. If you're on a long run, check it several times a day. And never overfill to cut or skip oil checks. Overfilling causes other troubles, so don't push your luck.

Same goes for the rest of the chassis —don't over-lube. Globs of grease can cause parts to bind and lock.

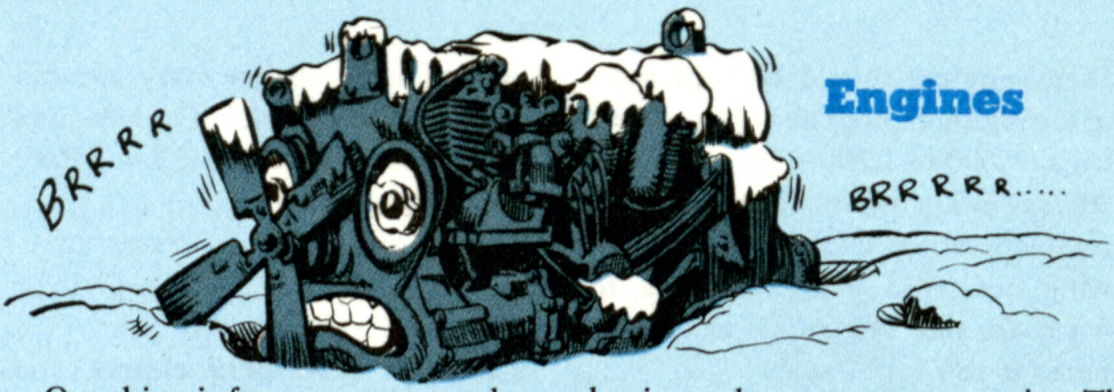


KEEP AN EYE ON THE OIL PRESSURE GAGE



CHECK DIFFERENTIAL, TRANSMISSION AND TRANSFER FOR CONDENSATION

Condensation is always looking for a place to happen. So in between your regular periodic lube services check one or 2 of your gear cases; like a differential, transmission or transfer. Any evidence of water contamination is the signal for an oil change. And never mix grades of oil—use the right stuff for the temperature range.



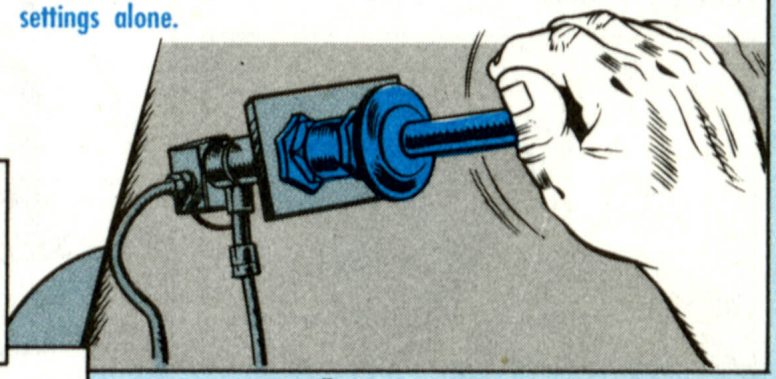
Engines

One thing is for sure, zero weather makes it tougher to start your engine. The best way to help yourself and the engine is to be familiar with the equipment's cold-weather starting procedure. Usually there're a few extras that have to be done—so bone up on that section of the -10 TM.

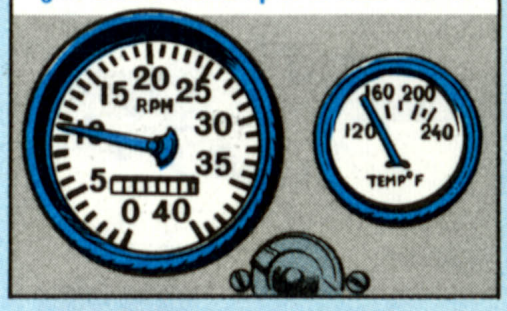
First off, keep your batteries at peak charge for good cranking power. Then turn off all accessories and crank the engine no longer than 20 to 30 seconds. Longer periods can burn up the starter.

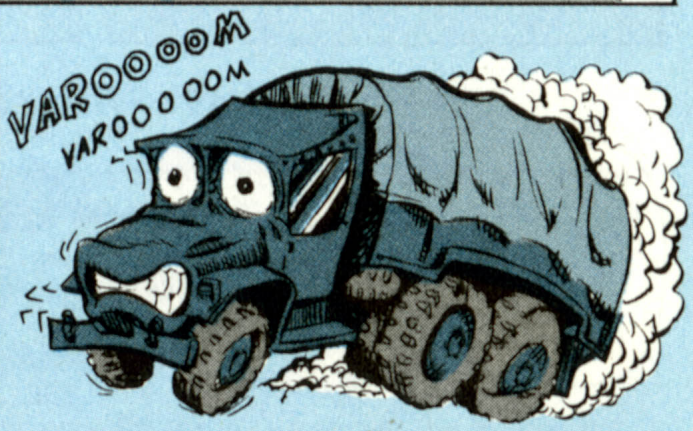
Wait a full 3 minutes before cranking again.

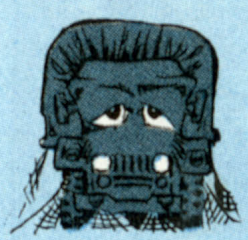
Many operators over-prime. This leads to hydrostatic lock and and crankcase oil dilution. Before turning the engine over — prime 2 or 3 slow strokes — no more. Then turn over the engine and prime slowly and sparingly until the engine'll run on the choke and throttle settings alone.



Easy on that throttle! Warm up at about 1,000 RPM and don't race the engine until it warms up to at least 140°F.







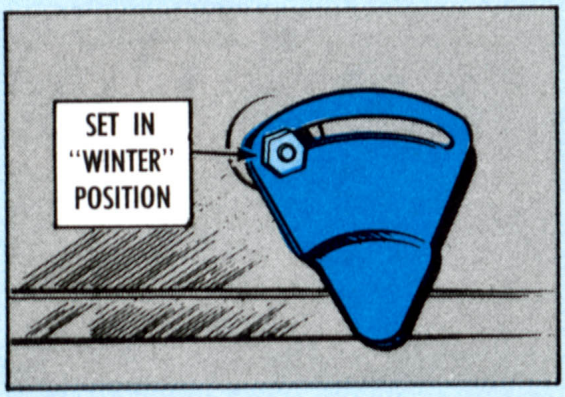
Idling under 800 RPM for long periods causes many problems. If you're required to run the engine to keep your radio in net or to operate some auxiliary equipment off the vehicle's power train, then run the engine at high idle—between 1,000 and 1,200 RPM. But never idle the engine unless it's for a useful purpose. When on a stop-and-go mission it's best to let the engine run at high idle.

PS MORE

Diesel engines should be kept running during short stops or waits—here again at 1,000 to 1,200 RPM.

Always bring the engine up to its normal operating temperature before moving out. And before shutting it down make sure you run it at least 5 minutes at 180°.

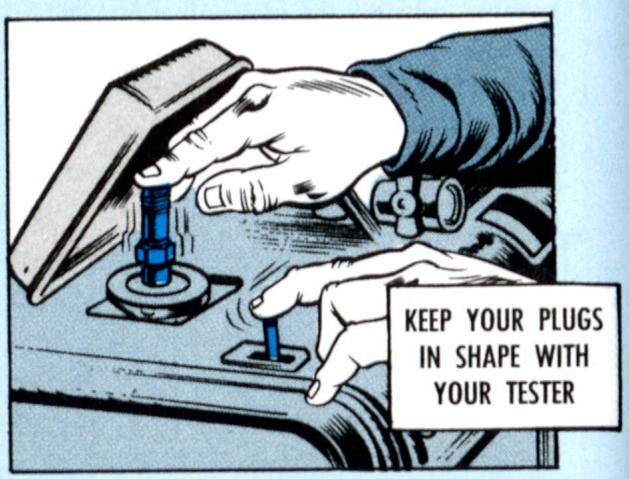
Manifold heat control valves are important in zero weather. The automatic type should work freely; the vacuum control linkage and spring must be in good working order. On the manual type, it's up to the operator to set it in the "winter" or "cold" position. Your -10 TM will tell you which type is on your equipment.



Spark plugs foul like crazy and can give you a lot of grief. Cold engines running at slow speeds and low RPM's are the greatest cause.

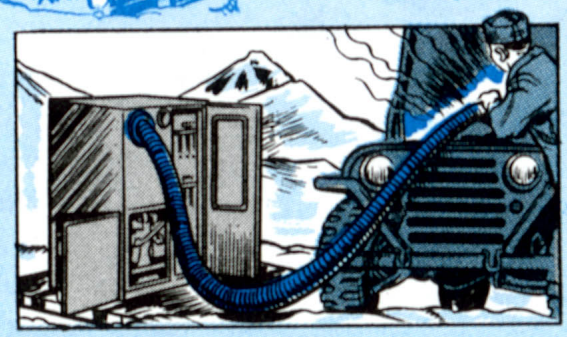
Zero weather calls for extra attention; don't wait until the next periodic S-service to clean and reset 'em.

There's a spark-plug cleaner and tester within reach of every unit. It's found in the No. 1 Supplemental and No. 2 Common Tool Sets. If you're new at plug cleaning, dig up a copy of TM 9-4910-422-12. The cleaning instructions in this TM can be applied to all makes of spark plug cleaners.

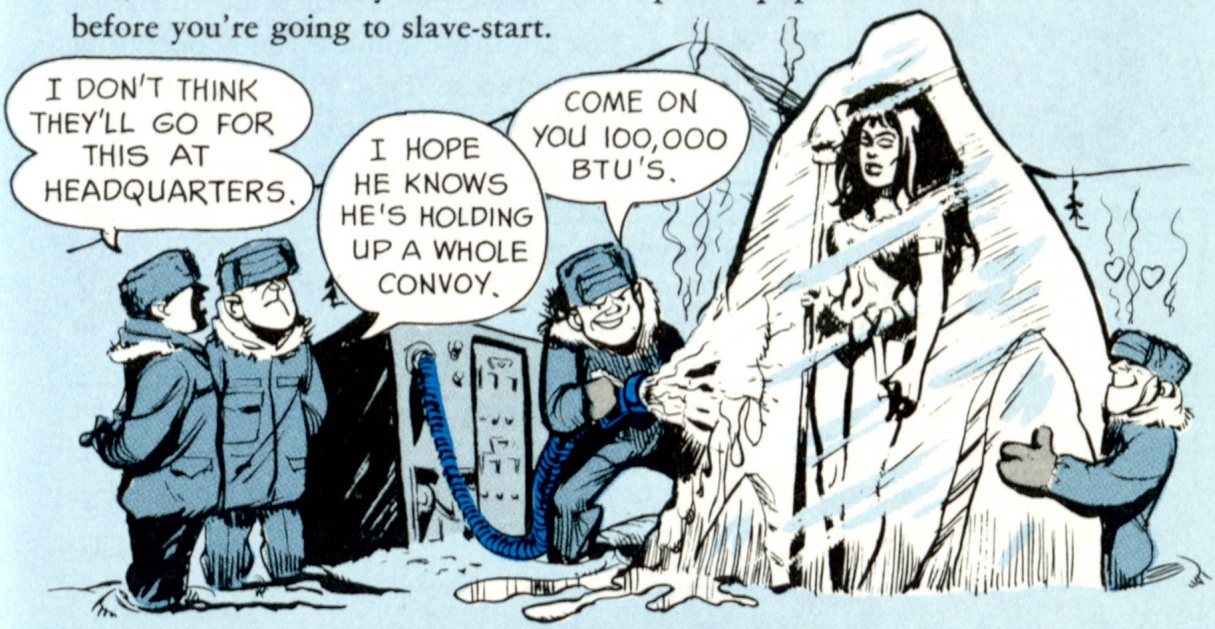


Slave-Starting

Starting aids are the grooviest in zero weather. Especially the M40 Cold Starting Aid Kit. An outfit that has at least 25 vehicles and operates in an average ambient temperature that's down to at least +5° F during the coldest month can get one—FSN is 2540-570-1354.



TB Ord 390 (Jul 52) tells all about its capabilities, operation and maintenance. The M40 kit can be adjusted for 6, 12 or 24-volt systems. The heater throws out 100,000 BTU in case you need to warm up the equipment with a blast of hot air before you're going to slave-start.

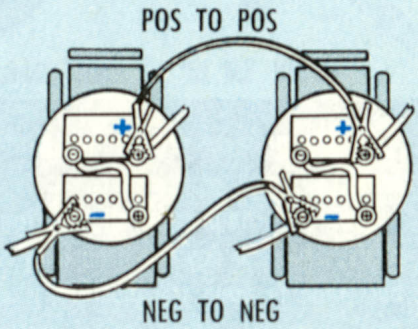


When using the kit, slave according to the TM for the particular vehicle or piece of equipment being slaved and use the M40 the way you would a slaving vehicle.

It's always a good idea to try to keep one vehicle in a semi-warm shelter, its batteries fully charged. You use it to slave-start the others.

Before doing any slaving, dig out a copy of TB Ord 537 (Sep 56). It gives the A, B, C's of slaving wheeled and track vehicles. This TB along with the vehicle's TM will give you the rules of the slaving game.

Stay awake and take an extra look when hooking up your jumper connections. The hook-up must always be positive to positive and negative to negative. On AC systems, even a slight flash on a wrong post will burn out a component. One thing you can be sure of is that all tactical and combat vehicles have a negative ground. Don't let anyone tell you otherwise.



A last word . . . while slaving keep the live vehicle running at 1,800 RPM and always pair up vehicles that have a similar battery configuration. Or to be exact, don't try to slave a tank that has four 6TN batteries with a 1/4-ton truck that only has two 2HN batteries. If you do you're just asking for more trouble.

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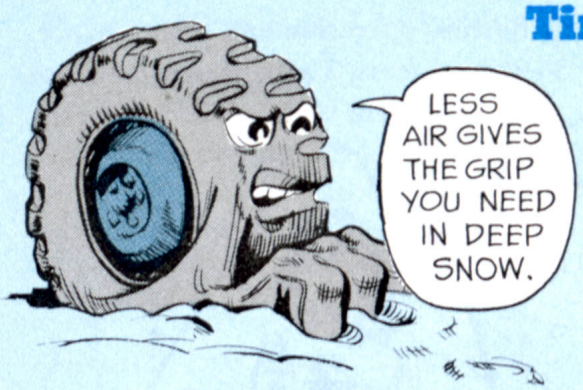
Tires



Zero weather requires no tire pressure adjustment unless you're operating in deep loose snow. Your -10 TM gives the low tire pressure that works best. But after the snow's gone get those tires back to their normal highway pressure.

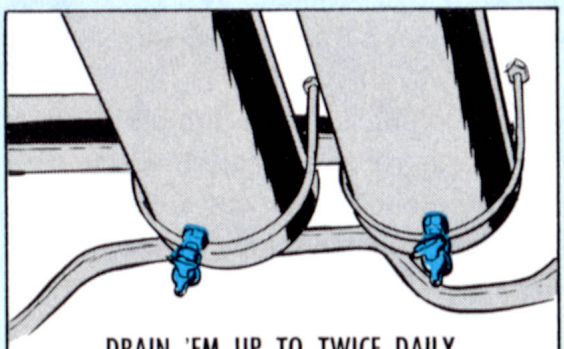
Tires can freeze tight to the ground and tear when you move out. During sleet or freezing rain move your vehicle every so often and avoid parking in puddles. Park on timbers, brush or whatever's available.

If you happen to get a flat spot frozen into a tire, move out slow like and let it round out easily.

Every valve stem should be capped or else the stems'll ice up and freeze solid. Then adjusting tire pressure won't exactly be a ball.

Air Brakes

Water accumulates in an air brake system even in fair weather, but during low winter temperatures it accumulates like mad.



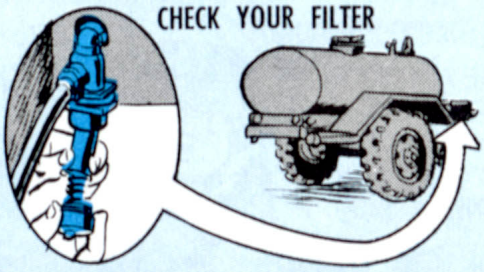
DRAIN 'EM UP TO TWICE DAILY

Let the pressure drop before draining the tanks.

Drain the compressed air reservoirs daily, or even twice a day when on long runs. The best time to open the petcocks is after the day's operation, then leave 'em open all night.

First thing next morning close the petcocks. Leaving them open for several days is OK when the vehicle's not going to be used. And never move out until the air has built up to the right pressure. On equipment that's equipped with a buzzer, don't move until it stops buzzing.

When towing a G754-series 1-1/2-ton trailer, drain its air line filter 'cause it loads up with water too. TM 9-2330-213-14 (Jan 64), para 73, tells how to do it. No drain, no trailer brakes.

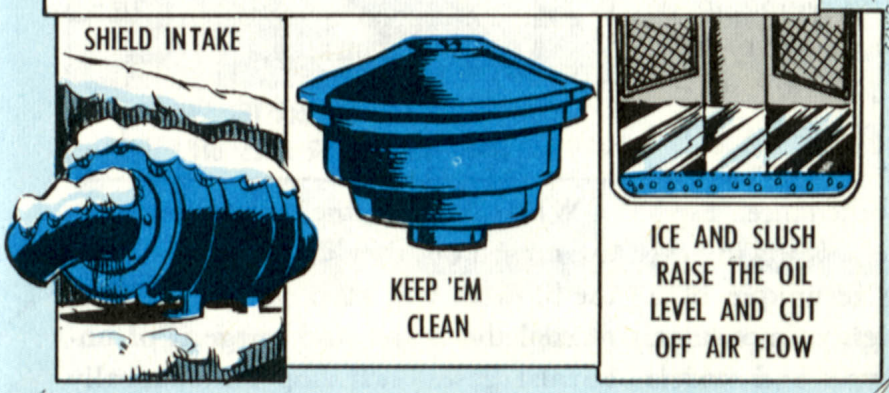


If your vehicle's air brake system is equipped with an alcohol evaporator, make sure it's operating and the jar is filled with alcohol. Use the same alcohol that you're winterizing the fuel with.

The air compressor's unloader valve shouldn't be frozen or stuck. To check it out, build the air pressure to its rated maximum, apply the brakes and hold 'em, then stop the engine. The pressure should not drop within one minute.

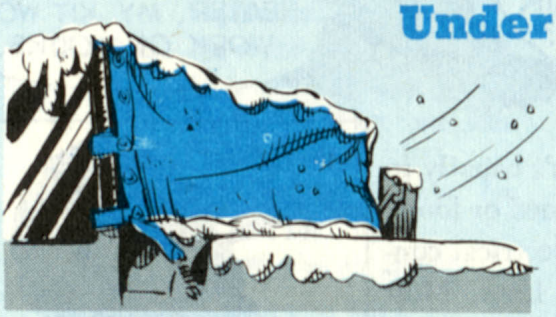
Air Cleaners

Air—good clean air and lots of it is needed to keep an engine alive and healthy. It's the air cleaner's job to make sure that air's clean, and it can't do this if it's choked up by ice.



The air cleaner intake must be protected so the engine can get its needed supply of air. The best way to assure this is to position or shield the intake so the snow and sleet can't get to it. And keep the area around it free of ice and snow.

Under Cover



Maintaining equipment in cold miserable weather can be a lesser pain in the end when you keep vital or delicate parts and equipment under cover. The first item that comes to mind is windshields. Especially when the truck's parked overnight in sleet.

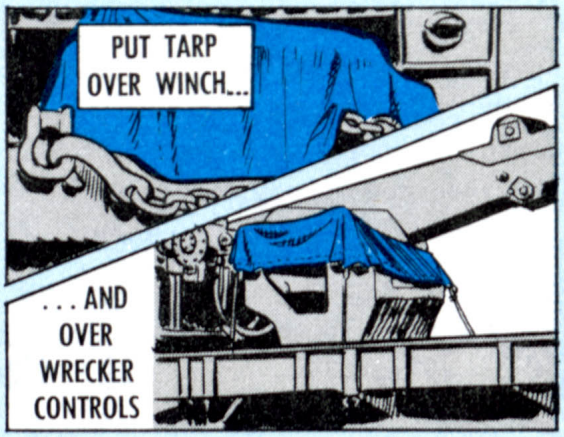
A piece of canvas or hardboard cut to size and fitted on the windshield during times like that really pays off.

This same technique can be used on many items that're left out in the

P.S MORE

weather all night—like exposed instrument panels, winches, sighting and fire-control equipment, operating levers, etc.

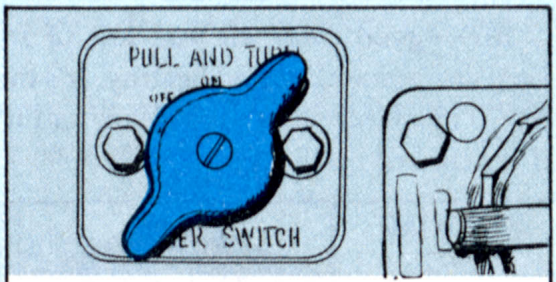
Many of these items already may have their own cover. If so, an extra minute putting it on pays big profits. Ask any operator who's spent half an hour chipping and scraping ice to get at his winch cable.



Heaters

In weather that'll make a brass monkey twitch and groan, a little heat can save many a delicate situation. Particularly a warm vehicle compartment. And no compartment is going to be warm unless you know how to keep your personnel heater putting out.

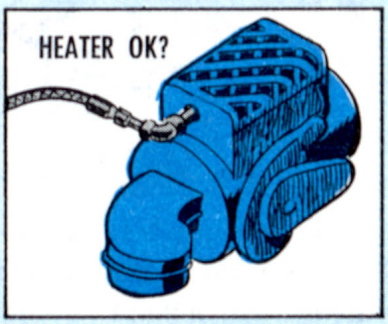
Keeping a stream of heat flowing from a heater depends on exact operation and constant maintenance. Especially on gasoline heaters. Knowing the starting and stopping technique of a gasoline heater is mighty important. Since there're several types and models being used, be certain you know how to operate the one you have before you start flipping switches.



DON'T TURN OFF THE MASTER SWITCH UNTIL THE HEATER GOES OFF

When most of the gasoline heaters are turned off, they'll stop burning but the blowers will keep running. This is to cool the heater and purge it of unburned gases. It'll stop automatically when it's ready. So never turn off a master switch when shutting down a vehicle until your heater stops.

When a gasoline heater goes kaput, it's usually in one of these areas . . . igniter fouled, burned or loose; flame switch out of adjustment; loose electrical connections; or clogged or leaking fuel lines. Most heaters have a parts repair kit that includes a replacement igniter. Know which kit your heater gets and have one handy for quick repairs.



When defrosting a windshield with your heater . . . careful. A sudden blast of hot air against frozen glass will crack it for sure. Always warm up your cab first then start the defrosters on LOW. After a few minutes of this then go to HIGH.

A Big NO-NO

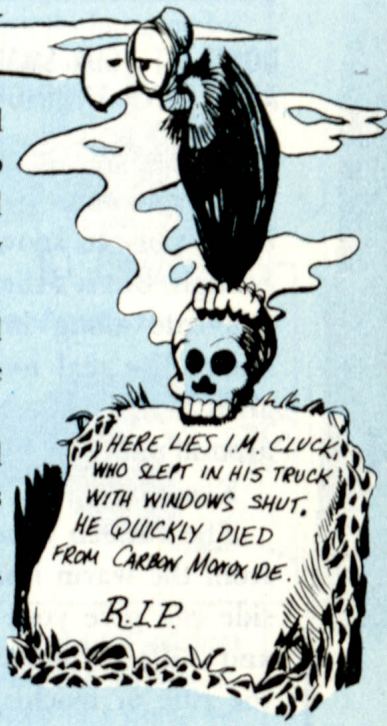
Operating equipment or pulling maintenance in a closed area with an engine or gasoline heater going can put you to sleep for a long time. Carbon monoxide is not to be fooled with—and nobody is tough enough to withstand its sneaky and deadly consequences.

Regardless of where you're holed up—driving in a closed cab or tuning an engine in a closed shop—you're a candidate for the deep 6.

In vehicles, keep a window or hatch cracked open—and even with that, never take a nap while the engine or heater's running.

In a work bay or shop, pipe the exhaust to the outside or keep the doors wide open.

Keep all gasoline heater exhausts and their couplings tight and leakproof. Don't take any chances—it's not worth it.



Cold Weather Library

To keep your equipment ready to shoot, scoot and communicate, the best bet is to scan through all the extreme cold weather publications for the portions that pertain to your climatic operations. Then work up a local SOP on their application. The publications you'll want to read up on are:

TM 9-207	Operation and Maintenance in Extreme Cold Weather
TB Eng 347	Winterization Techniques for Engineer Equipment
TB 750-651	Use of Anti-freeze and Cooling System Cleaning
SB 9-16	Winterization Kits and Aids (authorization)
SB 11-576	Cold Weather Batteries for AN/PRC Radio Sets
TB Ord 390	Cold Weather Aid Kit M40
TB 9-2855 series*	Winterization Kits
SNL G249 series*	Winterization Equipment
TM 9-8662	Fuel Burning Heaters (vehicles)
TM 9-247	Materials and Chemicals used For Cleaning
FM 31-70	Basic Cold Weather Manual
SB 38-100	Preservation, Packing and Marking Supplies
TM 9-6140-200-15	Lead-acid Batteries
TM 9-8638	Spark Plugs

*See your DA Pamphlet 310-4 for complete listing.

PS END

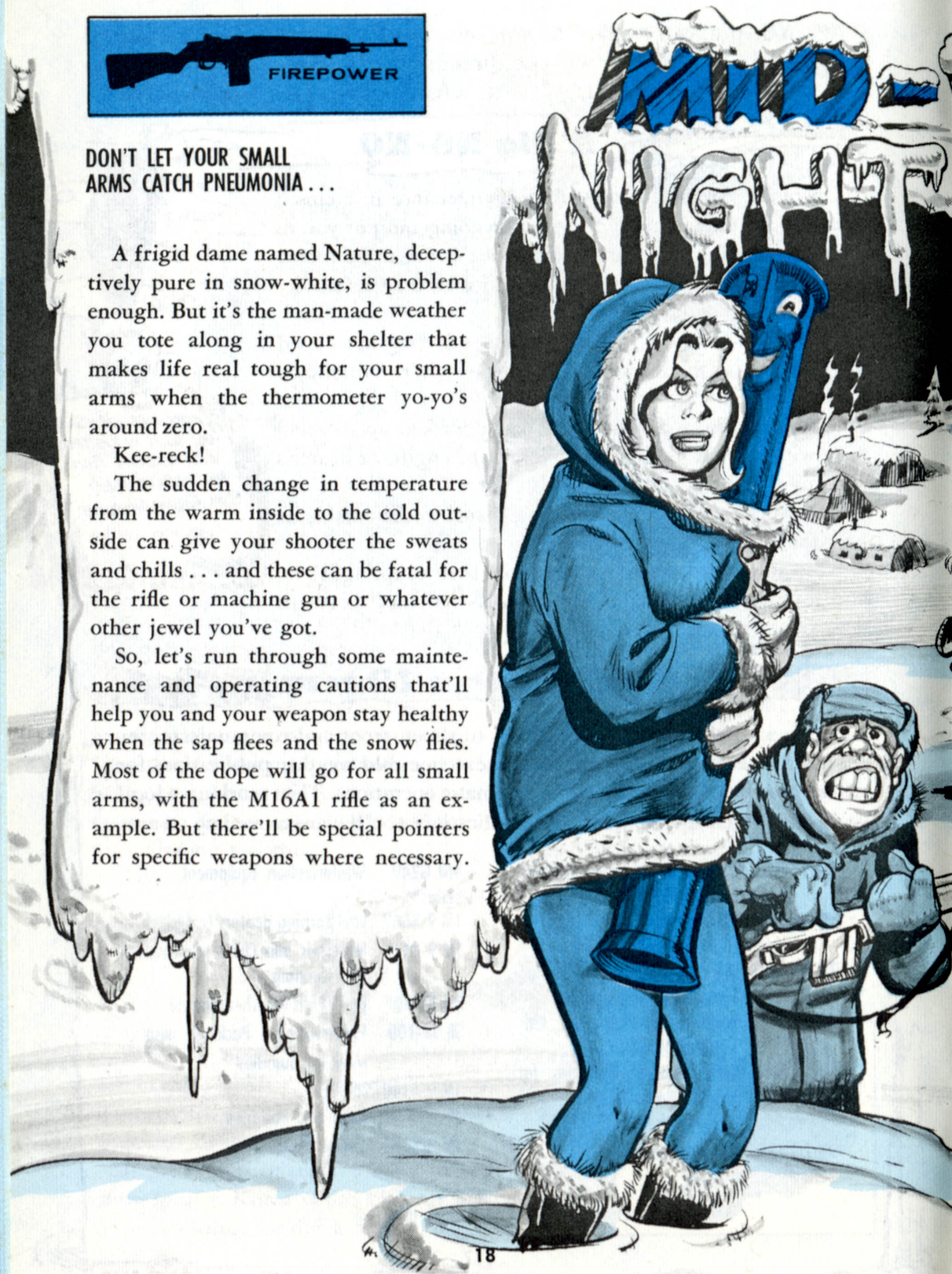
DON'T LET YOUR SMALL ARMS CATCH PNEUMONIA . . .

A frigid dame named Nature, deceptively pure in snow-white, is problem enough. But it's the man-made weather you tote along in your shelter that makes life real tough for your small arms when the thermometer yo-yo's around zero.

Kee-reck!

The sudden change in temperature from the warm inside to the cold outside can give your shooter the sweats and chills . . . and these can be fatal for the rifle or machine gun or whatever other jewel you've got.

So, let's run through some maintenance and operating cautions that'll help you and your weapon stay healthy when the sap flees and the snow flies. Most of the dope will go for all small arms, with the M16A1 rifle as an example. But there'll be special pointers for specific weapons where necessary.



MID-NIGHT MARE

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WINTER'S MARE

EXTRA PM IS BEST R_x

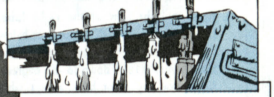
Light with the right lube and heavy with the cleaning—that's the first prescription for winter weapon PM.

Reason: Any carbon or gook you leave in there will hold moisture and cause freezing. Same thing if you use the wrong lube or even too much of the right lube. The wrong lube will get sluggish on top o'that.

A well-cleaned and lubed M16A1, f'rinstance, always has more built-in resistance to cold-weather ailments.

CLEANING AND LUBING —

1. Let your weapon stand in your warm shelter for an hour or two before PM-ing it. This'll let it sweat out the frozen condensation, snow, ice, and so on.

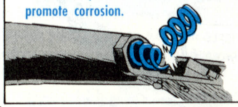


2. Wipe off all the condensation as you strip it.

3. Do the best cleaning job you can with bore cleaner, brushes, swabs and the like, according to your weapon TM's checks and services table.

4. Dry all parts extra good with clean rags and swabs.

5. Eyeball every part for breakage and corrosion, especially fragile parts like springs — and especially all parts that move and are affected by recoil. Cold weather makes metal brittle, and condensation and snow promote corrosion.



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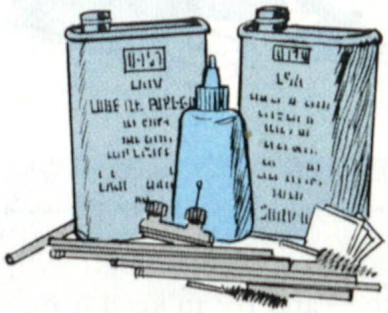

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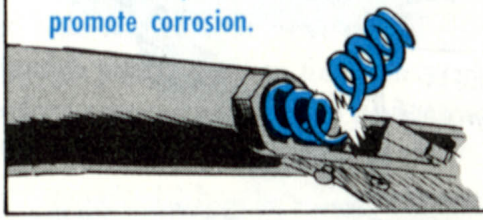

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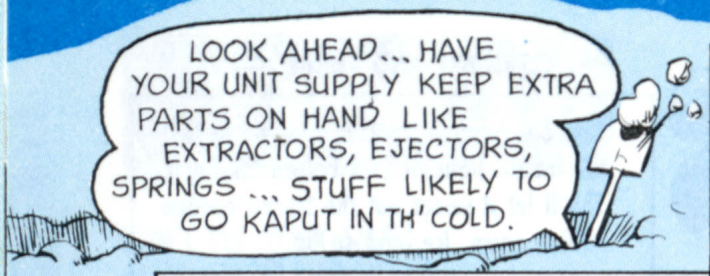
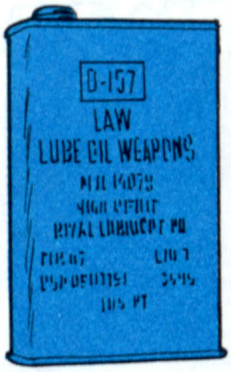


6. Apply a **light film** of the **right lube.** LAW'S regulation for all weapons in below zero weather, but in a pinch you can use LSA on your M16A1 down to -35 degrees. Never use any other lube, except what your TM or CO says.

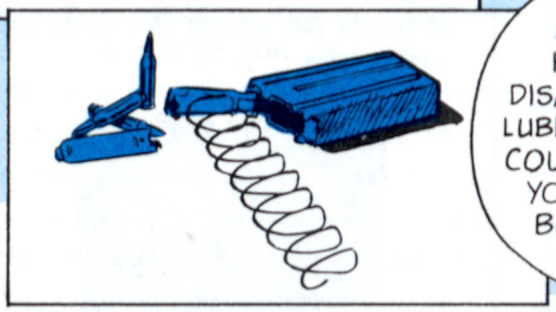
Speaking of the M16A1, be sure you lube the inside of the lower receiver extension and if your armorer's handy get him to lube the outside. This is a trouble spot.

Light film: Put some lube on a clean rag or swab, squeeze the cloth dry, and then wipe all parts and surfaces with it. Don't miss any areas. And no generous doses anywhere in freezing weather, savvy?



LAW (Lube Oil, Weapons, MIL-L-14107B) comes in a 1-qt can under FSN 9150-292-9689.

7. Reassemble your weapon and function-check it. Make sure all parts work.



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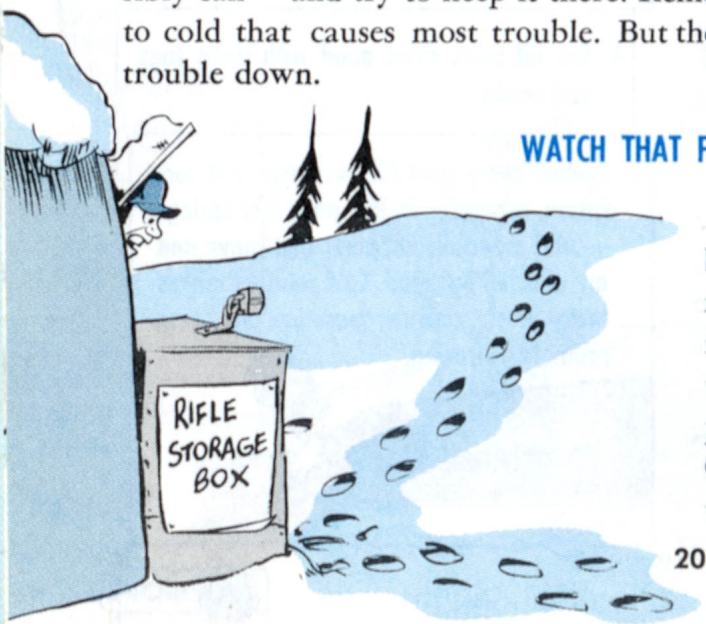
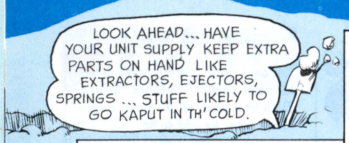


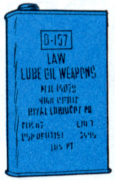
WATCH THAT FLUFFY STUFF

Some hep units locate cold-storage boxes outside their warm-up bunkers for guys to leave their rifles in while the riflemen thaw out. Any type of box or unheated shelter will do as long as it protects the weapons from snow. O'course, these weapon boxes or shelters are kept guarded . . . natch!



Light film: Put some lube on a clean rag or swab, squeeze the cloth dry, and then wipe all parts and surfaces with it. Don't miss any areas. And no generous doses anywhere in freezing weather, savvy?

6. Apply a **light film** of the **right lube.** LAW'S regulation for all weapons in below zero weather, but in a pinch you can use LSA on your M16A1 down to -35 degrees. Never use any other lube, except what your TM or CO says.



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Speaking of the M16A1, be sure you lube the inside of the lower receiver extension and if your armorer's handy get him to lube the outside. This is a trouble spot.

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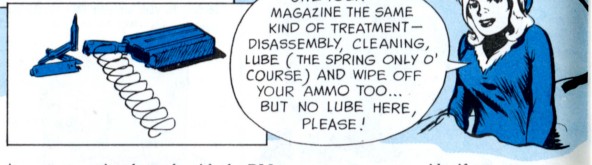

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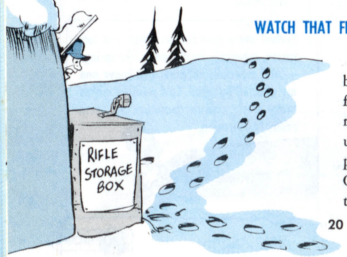

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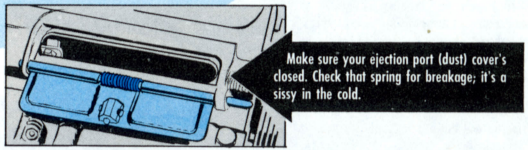
You can't keep your weapon from freezing, but you'd darned well better do all you can to keep the freeze from putting you out of action. What you do, of course, depends on your tactical situation.

First and foremost, natch, is to try to keep snow and ice out of your weapon . . . out of your magazine . . . and off your ammo. Use your head on this: Handle your weapon carefully when moving through snow-covered woods and especially in deep snow so that you don't let the stuff into the working parts, sights and barrel. Keep your ammo in your pouch or covered with a tarp or something, if you can.



FIRING TIPS

If the situation's so hot you don't have time to clean your M16A1 the right way, chamber a round and close the bolt right after firing. Then you'll be able to fire that next round—even though you'll need to fire at least three before you can expect top performance. But never leave that round in the chamber more'n 12 hours.

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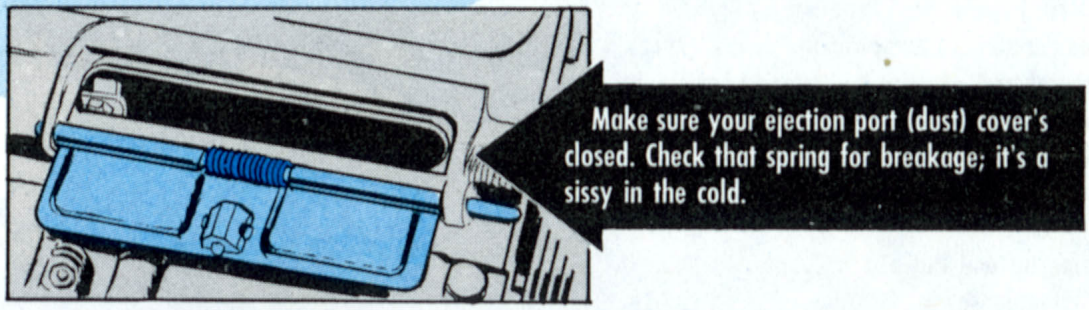

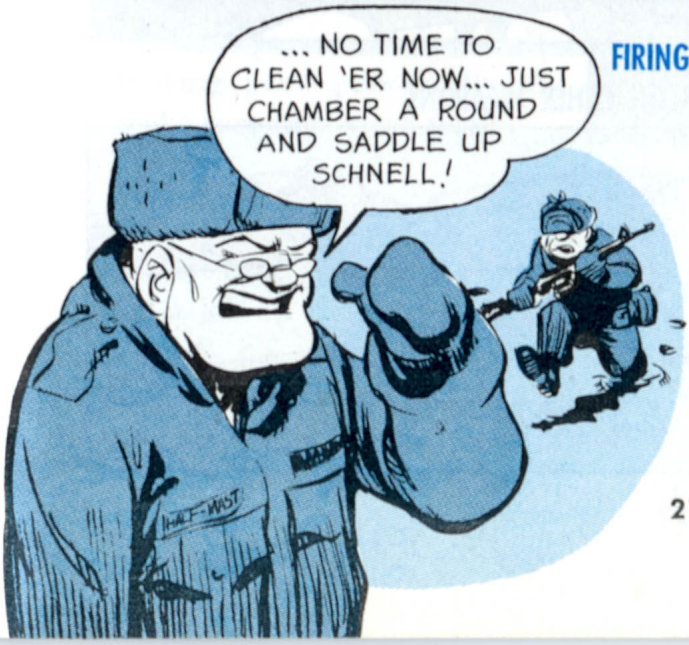

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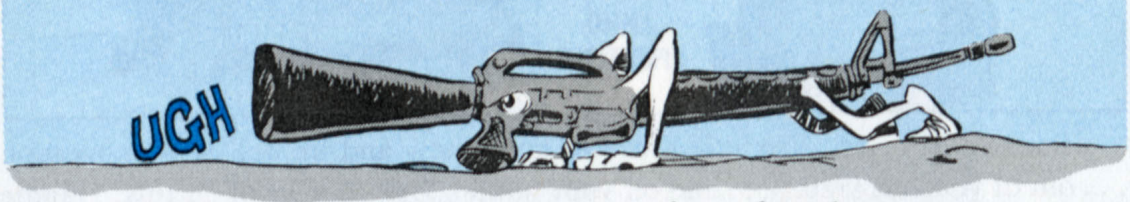
PS MORE

Incidentally, if you do get a misfire on the first shot with any weapon in freezing weather, the first couple steps of immediate action will usually clear it. So, know ahead of time what you're supposed to do.

On any weapon, try to fire at a slow rate at first to let your shooter warm up gradually. This'll help prevent parts breakage as the weapon's temperature suddenly shoots up.

EXERCISING'S NECESSARY



Just like you flap your arms and stamp your feet to keep loose, so your weapon needs exercising to keep the freeze out of its bones.

Again, however, you have to use your head and adapt to the tactical situation. One thing's for certain, though: Exercise your weapon gently — no slamming or banging or forcing. You'll for-sure bust frozen parts that way.

Anyhow, maybe these tips for M16A1 zappers will help your thinking, no matter what weapon you've got:

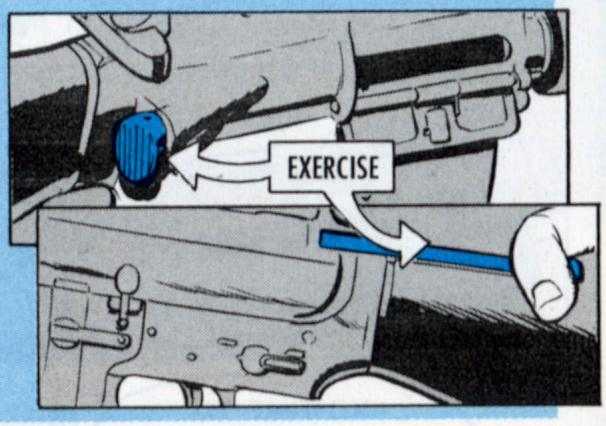
If You Have Only A Couple Of Seconds — Put the selector lever on SAFE . . . chamber and eject a few rounds . . . then put the lever back on SEMI or AUTO.

This will exercise the fighting parts of your weapon, especially the bolt, which is most likely to freeze up on you.

If Time's No Problem — Remove the magazine . . . then, making sure no round's chambered, exercise the charging handle, forward assist, selector lever, dust cover, and the front and rear sights. (Use the nose of a cartridge on the sights.)

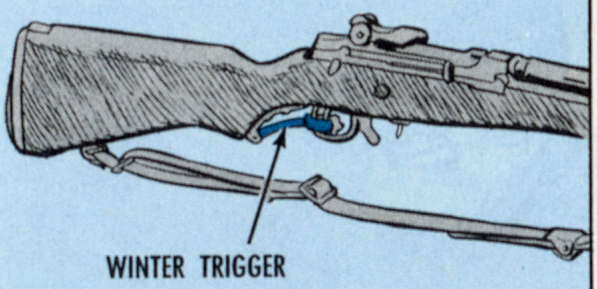
Lastly, press the top round in your magazine up and down a few times to keep the spring loose.

This'll do it . . . till next time.



SPECIAL HINTS ON OTHER WEAPONS

M14 Rifle — Add the gas cylinder to the items that need special cleaning attention in cold weather. Winter trigger components should be dried, cleaned and lubed lightly in all pivot areas. Cycle the rifle, if there's time, to make sure movement's free.



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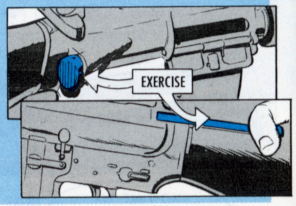

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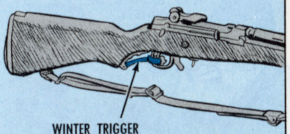
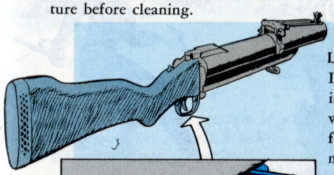
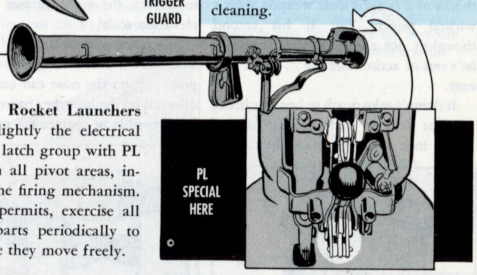


Pistols, Revolvers — In below freezing temperatures, all moving parts of the .45-cal pistol must be kept free of moisture. Clean 'em with dry cleaning solvent or mineral spirits and lube metal parts lightly with PL Special lubricating oil. You'll get less condensation if these weapons are kept near temperature of air around 'em. If you bring 'em in from the cold, let 'em reach room temperature before cleaning.



M79 Grenade Launchers — Launcher has winter-type trigger guard. It can be moved (right or left) by pressing detent assembly to permit firing while wearing gloves or mittens. Keep free of moisture or excess oil in cold climates. Remove excess oil with dry cleaning solvent. Lubricate lightly with PL Special. Keep down condensation moisture by maintaining launcher at outside-air temperature. Indoors let it warm to room temperature before cleaning.



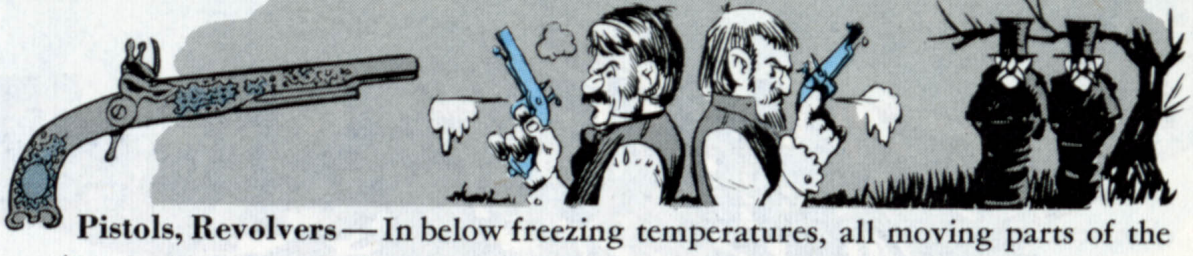
3.5-In Rocket Launchers — Lube lightly the electrical contactor latch group with PL Special in all pivot areas, including the firing mechanism. As time permits, exercise all moving parts periodically to make sure they move freely.

WEAPON MOUNTS

'Twon't do a-tall to have a perfectly functioning weapon on a mount that's frozen. So, every time you PM your weapon — if time and conditions allow — do a job on the mount, too. This won't be a problem usually for bipods and tripods, but it will be for mounts installed in bunkers and on vehicles.

Once more, all you can do is your best. Do your best to protect 'em from snow, clean and lube 'em every chance you get, and keep 'em lightly lubed.

PS END



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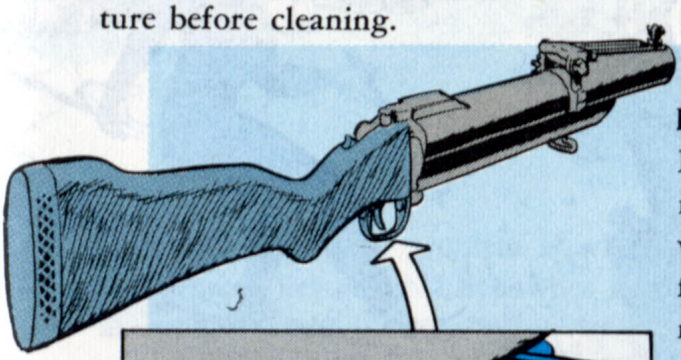

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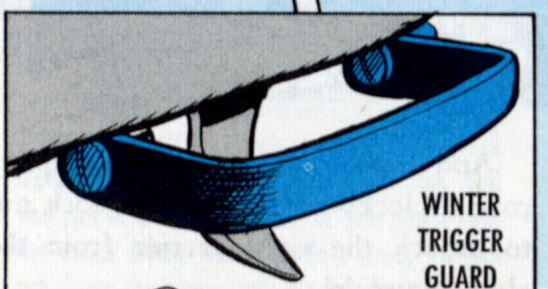

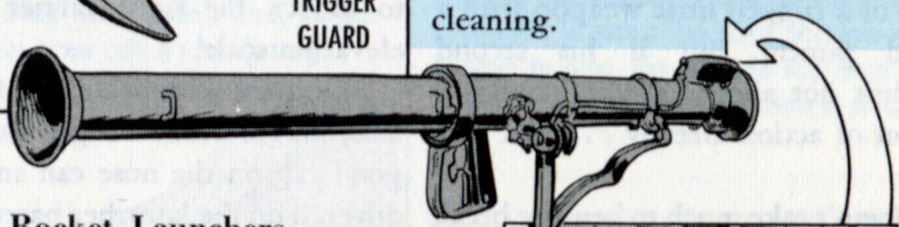

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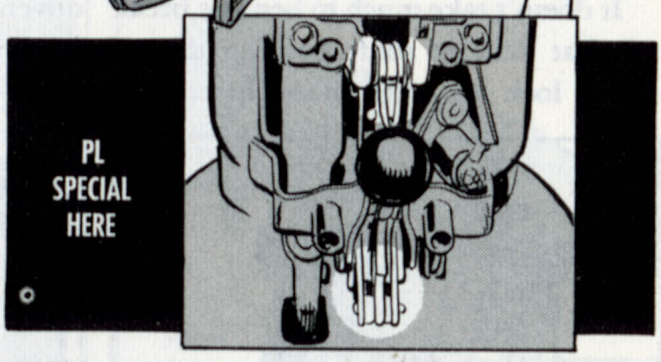

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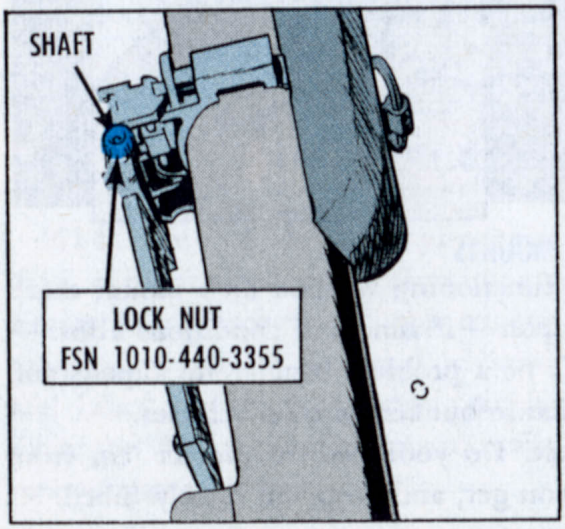
M79 HIND SIGHT

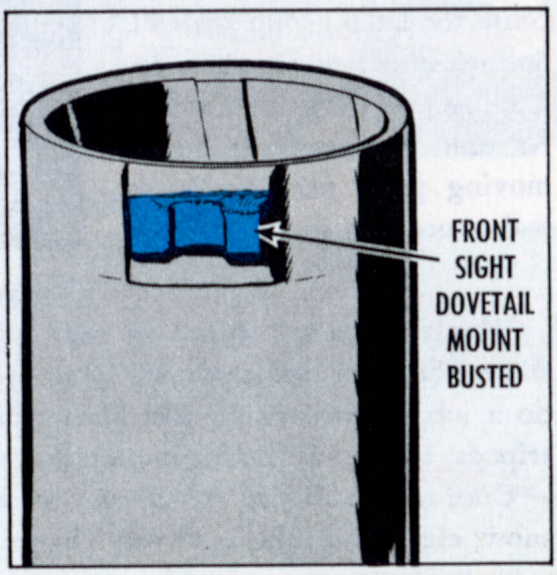
Mention the M79 40-MM grenade launcher to a grenadier and he proudly thinks of a rugged little weapon with a wicked punch. But if his second thought's not about careful handling, he's out of action already . . . just that easy.

It doesn't take much to bend or break off that delicate shaft holding the retainer lock nut onto the sight carrier.



And it only takes about 2 complete counterclockwise turns of the lock nut to unlock the sight carrier from the elevation scale.

Not quite as delicate, the front sight also suffers from rough handling. A good rap on the nose can snap off the dovetail on the launcher barrel, making it impossible to replace the sight.



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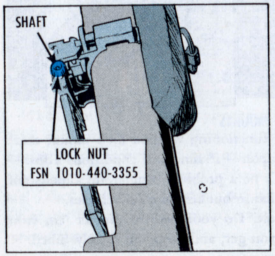
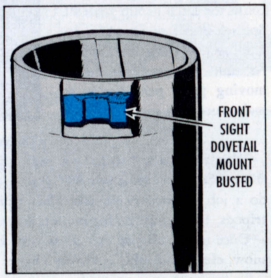




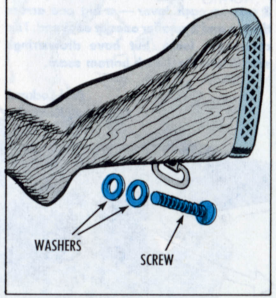
So whenever you can't stack your launcher securely in an upright position, rest it gently on its right side to prevent damage to the retainer lock nut. And don't park any other weapons or heavy objects on top.

Sometimes the shaft on the sight carrier loses its companion — the retainer lock nut. Once it's gone, there's not much you can do but ask supply support for another nut, FSN 1010-440-3355.

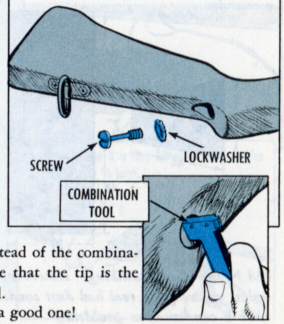
TIGHT SCREW?

Another rear end problem is where the stock joins the receiver group. As every grenadier worth his powder knows, the M79 launcher has both wooden and plastic stocks . . . depending which area of the world you've got your sights zeroed in on.

WOOD STOCK — If you own a wooden stock weapon, the stock screw takes 2 washers. And you **never overtighten** — or you might split the stock when the weapon's fired. So just run down the screw until it's barely snug.



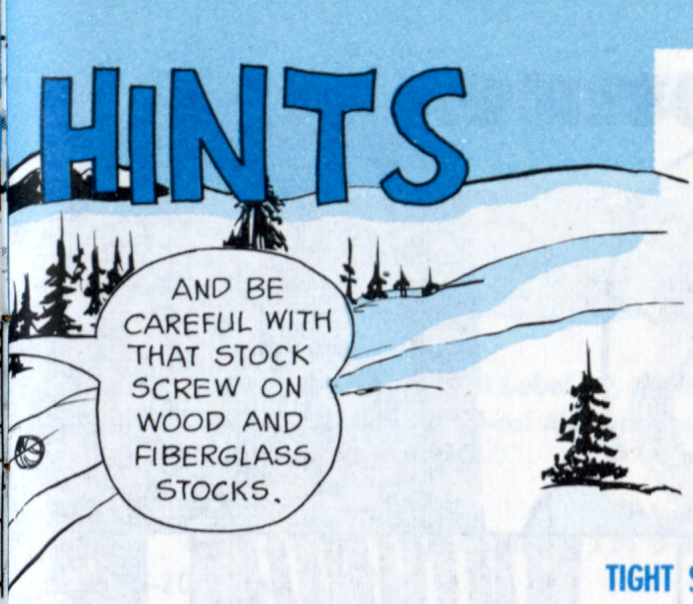
PLASTIC STOCK — If you're shouldering a fiberglass stock launcher, it's got another type of stock screw (externally relieved body screw) with just one lockwasher and it wants an extra 1/8-turn of the screw after you run it down to snug. But don't do any more than that — or you'll freeze the screw in place.



And if you're using a screwdriver instead of the combination screwdriver-wrench tool, please see that the tip is the right size to fit the slot in the screw head.

If you're going to be a grenadier, be a good one!

HINTS



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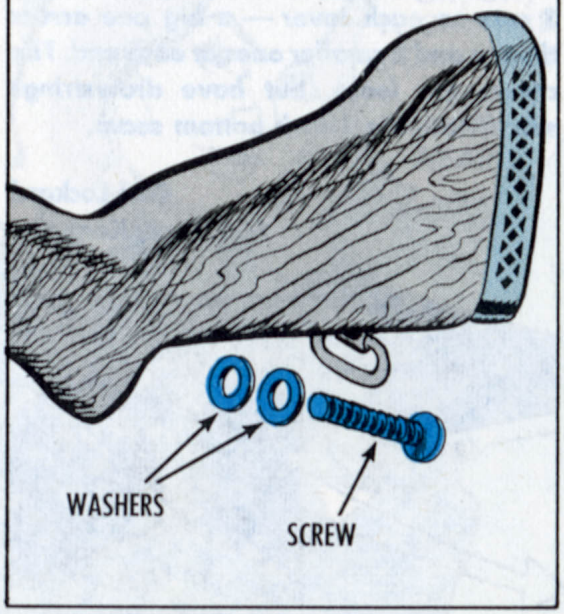

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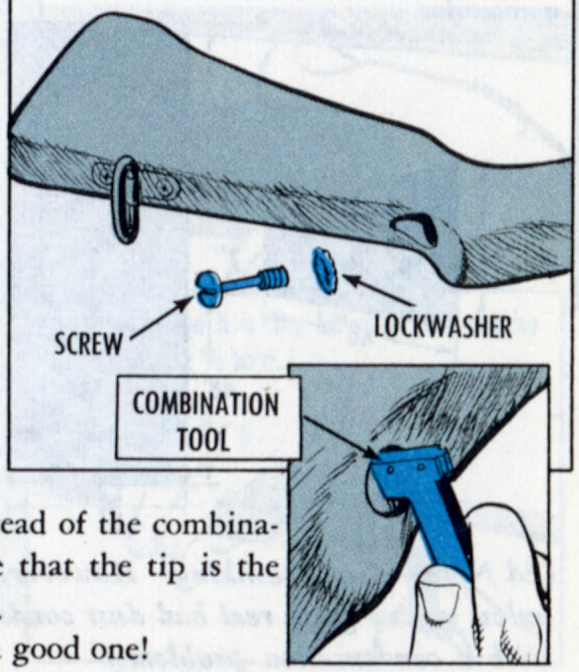

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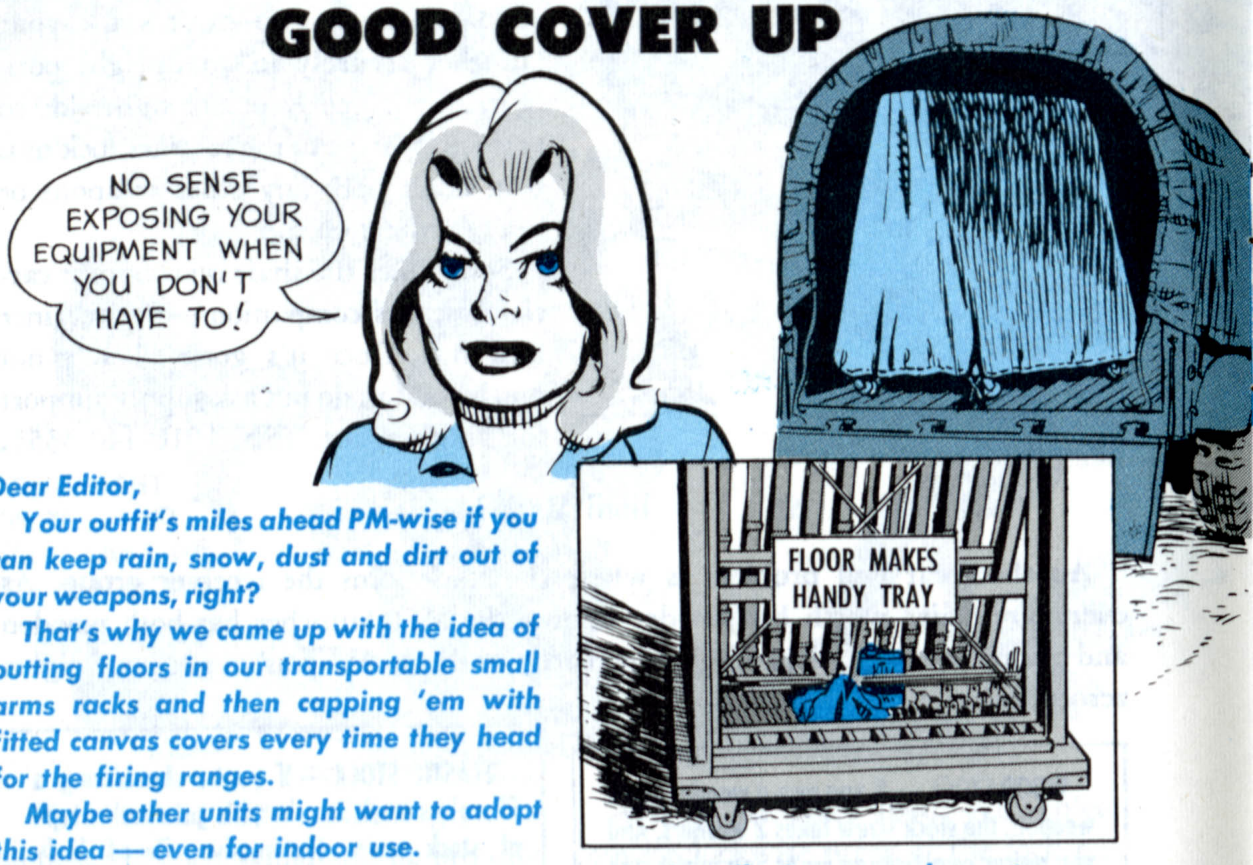
If you're going to be a grenadier, be a good one!

GOOD COVER UP



Dear Editor,

Your outfit's miles ahead PM-wise if you can keep rain, snow, dust and dirt out of your weapons, right?

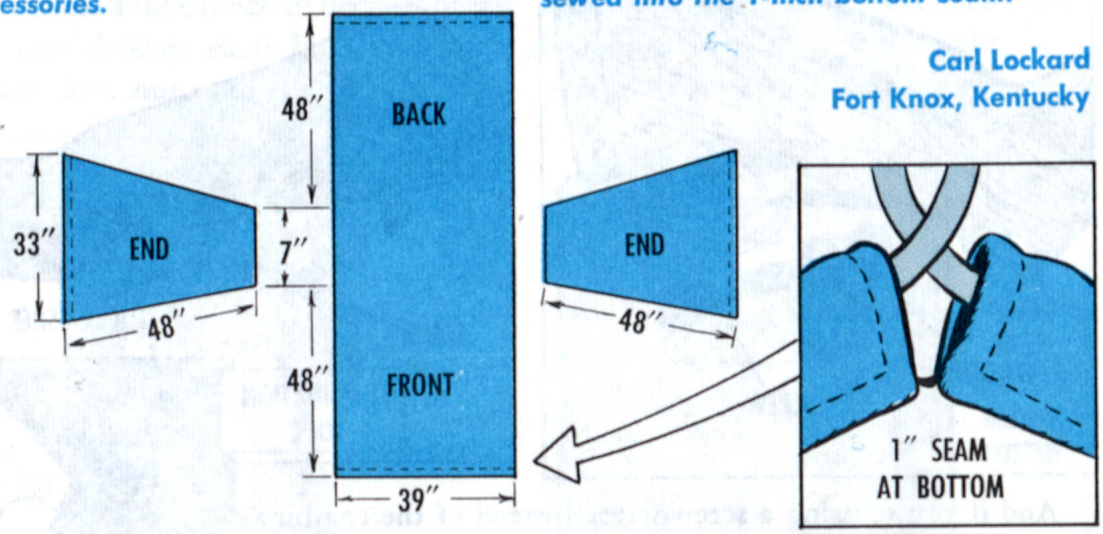
That's why we came up with the idea of putting floors in our transportable small arms racks and then capping 'em with fitted canvas covers every time they head for the firing ranges.

Maybe other units might want to adopt this idea — even for indoor use.

For the floors we used either ⅜-inch plywood or 16-gage metal sheets, nailing or screwing 'em into place. Besides keeping dust from blowing up into the weapons, these floors make fine trays for holding magazines and cleaning equipment and accessories.

The friendly Omars at the post canvas shop made the covers, using a live rack of each type we have as a model. They used 3 cuts on each cover — a big one across the top and 2 smaller ones at each end. The covers are loose, but have drawstrings sewed into the 1-inch bottom seam.

Carl Lockard
Fort Knox, Kentucky



(Ed Note—Good thinking! However, don't keep the drawstring tight indoors unless you've got a real bad dust condition . . . otherwise you might end up with a condensation problem.)

WHO NEEDS REMINDING?

Dear Half-Mast,

What's the scoop on DA Label 19, the decal that reminded you to check FM 23-65 before headspacing your 50-cal M2 machine gun? Is this label still in effect, or what?

SSG H. L.

Dear Sergeant H. L.,

Nope, it was washed out by TM 9-1005-213-10 (12 Jul 68) and some vehicle -10 pubs.

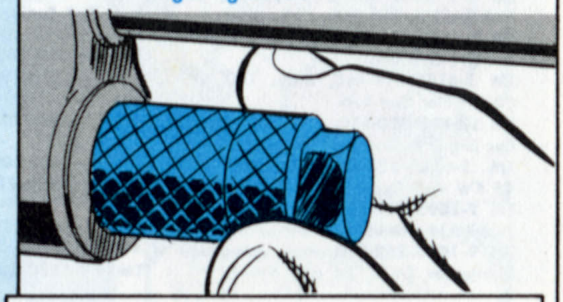
Headspacing's as important as ever, however. So, remind yourself every time you go to use your M2 that you have to headspace it according to your vehicle's TM or FM 23-65 — or even PS 197 — whichever is handiest.

Half-Mast

SNUG PLUG, REMEMBER?

The gas cylinder plug on your M14 rifle wants to be just snug — not real tight. Otherwise, if carbon gets on the threads, that plug'll freeze. So, snug, Man, like so:

Turn it finger tight. . . .



Then nudge it a tiny bit with your combo tool . . . say a 1/8 turn.

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (May 68), and Ch 5 (Apr 69), TM's, TB's, etc.; DA Pam 310-6 (Jul 69), SC's and SM's; DA Pam 310-7 (Jun 69), MWO's and DA Pam 310-9 (Apr 68), COMSEC Pubs.

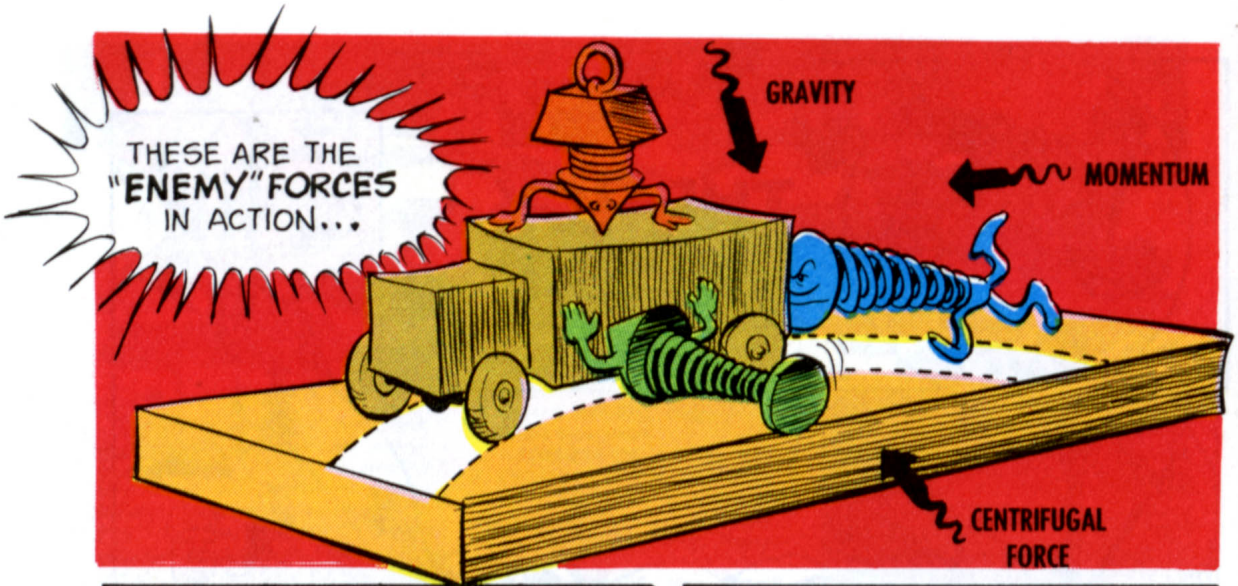
ESC'S

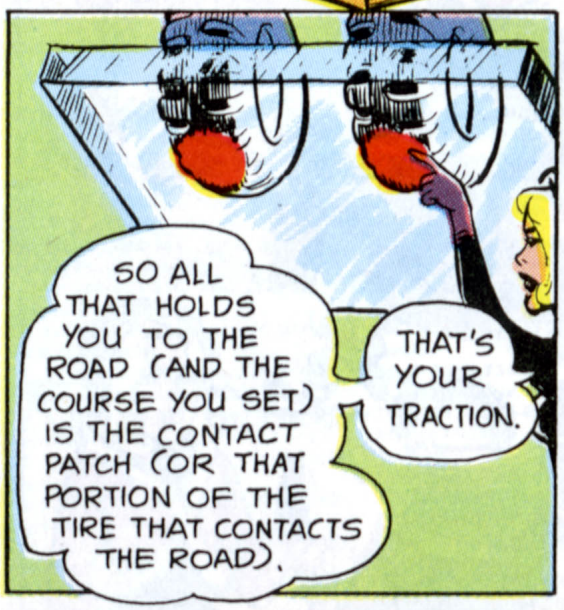
TM 3-1040-202-ESC, Apr, ABC-M3A3 Pulse Jet Mech Smoke Gen.
TM 3-1040-204-ESC, Apr, M2A1-7 Portable Flame Thrower.
TM 3-4230-200-ESC, Apr, M3A3 Trk Mtd Power Drvn Decon App.
TM 5-3800-200-ESC, May, Earth Moving Equip Loaders.
TM 5-4300-211-ESC, 600 CFM Air Compressors.
TM 5-4610-224-ESC, May, Water Purification Equip.
TM 5-5420-204-ESC, May, Mobile Ferry Assault Bridge (MOFAB).
TM 5-5420-207-ESC, May, Bridge Launchers (AVL).
TM 5-6100-208-ESC, May, 15-KW 60 Cyc Gen Sets.
TM 5-6100-209-ESC, May, 30 KW 60 Cyc Elec Gen Sets.
TM 5-6100-210-ESC, May, 45 KW 400 Cyc Elec Gen Sets.
TM 5-6100-212-ESC, May, 5 KW 400 Cyc Elec Gen Sets.
TM 5-6100-215-ESC, May, 100 KW 60 Cyc Elec Gen Sets.
TM 5-6100-220-ESC, May, 15 KW 60 Cyc Eng Drvn Gen Sets.
TM 5-6100-223-ESC, May 30 KW 45 KW 400 Cyc Elec Gen Set.
TM 9-1005-257-ESC, May, Armament Pod XM18, XM18E1.
TM 9-1005-262-ESC, May, Armament Subsystem XM23/24 and XM41.
TM 9-1005-298-ESC, May, XM27E1 Armament Subsystems.
TM 9-1005-304-ESC, Jul, Door Mtd Lt Wt XM23/24 7.62-MM.
TM 9-1010-207-ESC, May, Armament Subsystem M5.
TM 9-1055-205-ESC, May, Honest John.
TM 9-1055-208-ESC, May, Honest John.
TM 9-1090-202-ESC, May, Armament Subsystem XM21.
TM 9-1090-203-ESC, Apr, Armament Subsystem XM28.
TM 9-1450-501-ESC, May, XM727 Hawk Carrier.
TM 9-2320-205-ESC, May, M76 Carrier.
TM 9-2320-206-ESC, May, M123 Tractor Truck and M125 Cargo Truck.
TM 9-2320-213-ESC, May M274/ M274A1 ½ Ton Utility Platform Truck (Mule).
TM 9-2320-223-ESC, May, M116 Carrier.
TM 9-2320-238-ESC, May, M578 Recovery Vehicle.
TM 9-2320-246-ESC, May, M274/ M274A1 ½ Ton Platform Truck (Mule).
TM 9-2350-242-ESC, Apr, M88.
TM 10-3900-203-ESC, May, Rough Terrain Forklift Truck.
TM 11-284-ESC, May, AN/GRC-3, 4, 5, 6, 7, 8 Radios.
TM 11-1510-203-ESC, Apr, U-6A.
TM 11-1510-203-ESC-1, Apr, U-6A.
TM 11-1510-204-ESC, May, OV-1A-1B-1C.
TM 11-1520-202-ESC, Apr, CH-34A, CH-34C.
TM 11-1520-203-ESC, May, CH-37B.
TM 11-1520-210-ESC, Apr, UH-1B-1C-1D.
TM 11-2643-ESC, May, AN/VRC-43, 44, 45, 46, 47, 48, 49 Radios.
TM 11-5820-222-ESC/1, May, AN/VRC-24 Radio.
TM 11-5820-401-ESC/4, Apr, AN/VRC-47 Radio.
TM 11-5820-401-ESC/5, Apr, AN/VRC-49 Radio.
TM 11-5820-401-ESC/7, May, AN/VRC-54 Radio.
TM 11-5820-453-ESC, May, AN/GRC-87, AN/VRC-34 Radios.
TM 11-5820-469-ESC, May, AN/TRC-80 Radio.
TM 11-5820-498-ESC/1, May, AN/GRC-125 Radio.
TM 11-5820-498-ESC/3, May, AN/VRC-53 Radio.
TM 11-5820-498-ESC/4, May, AN/PRC-77 Radio.
TM 11-5820-667-ESC, May, AN/PRC-77 Radio.
TM 11-5840-201-ESC, May, AN/FPS-36, AN/FPS-75.
TM 11-5840-335-ESC, Jun, Nike-Herc.
TM 11-5895-208-ESC, May, Interrogator Set AN/TPX-27.
TM 11-5895-284-ESC, May, OV-1A-1B-1C.
TM 11-6660-204-ESC, May, Radiosonde Recorders AN/TMQ-5, AN/TMQ-5A, AN/TMQ-5B, AN/TMQ-5C.
TM 55-1510-201-ESC, Jul, U-8.
TM 55-1510-202-ESC, Jul, O-1.
TM 55-1510-203-ESC, Jul, U-6.
TM 55-1510-204-ESC, Jul, OV-1.
TM 55-1510-205-ESC, Jul, U-1.
TM 55-1510-209-ESC, Jul, U-21
TM 55-1520-202-ESC, Jul, CH-34.
TM 55-1520-203-ESC, Jul, CH-37.
TM 55-1520-204-ESC, Jul, OH-13.
TM 55-1520-206-ESC, Jul, OH-23.
TM 55-1520-209-ESC, Jul, CH-47.
TM 55-1520-210-ESC, Jul, UH-1A-1B-1C-1D.
TM 55-1520-214-ESC, Jul, OH-6.
TM 55-1520-217-ESC, Jul, CH-54.
TM 55-1520-221-ESC, Jul, AH-1G.
TM 55-1520-228-ESC, Jul, OH-58.

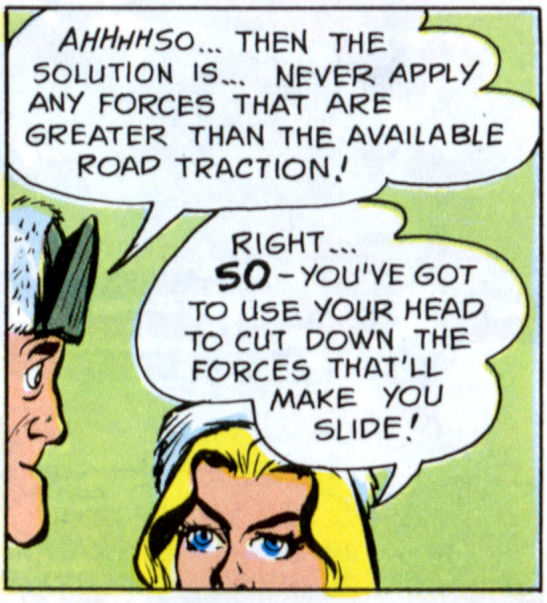
SCRATCH DA 2408-3

More PM time, less paperwork. That's how it stacks up for Organizational maintenance in DA Msg DCSLOG-LOG/MP-PB to major commands eliminating use of DA Form 2408-3 effective 1 Oct 69. After that all aircraft maintenance will be reported on DA Form 2407 each calendar month. For other equipment, DA 2407 at unit level will report only MWO's and installation of combat vehicle engines and track, odometers, gun tubes, hourmeters and tachometers at the time of these maintenance actions.

JOE'S DOPE
THE ICY THREAT
SO, YOU'RE GOIN' UP TO JOIN OPERATION RUNNYNOSE, CONNIE? WHY DON'TCHA HITCH A RIDE WITH THOSE TROOPERS!!? THEY'RE HAULIN' A LOAD OF ELECTRONIC STUFF UP THERE!
SAY, CONNIE, HOW 'BOUT SOME GOOD TIPS ON WINTER DRIVING!
IT'S A ROUGH HAUL AHEAD.
LET'S START WITH THE "ENEMY" FORCES YOU'RE UP AGAINST.

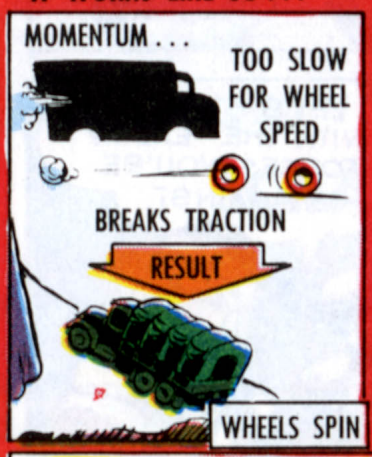


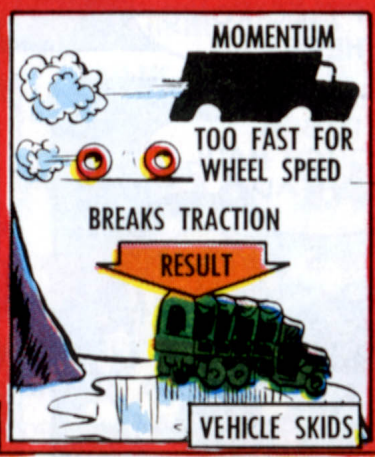


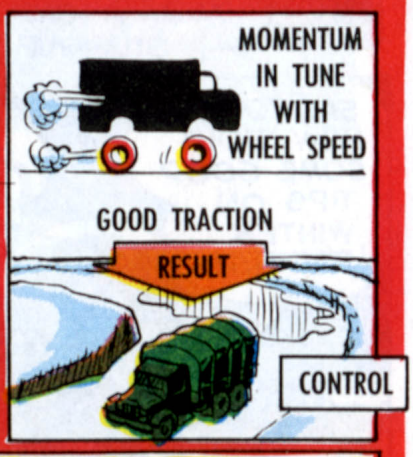


YOU MUST BE IN CONTROL OF TRACTION AND MOMENTUM ALWAYS

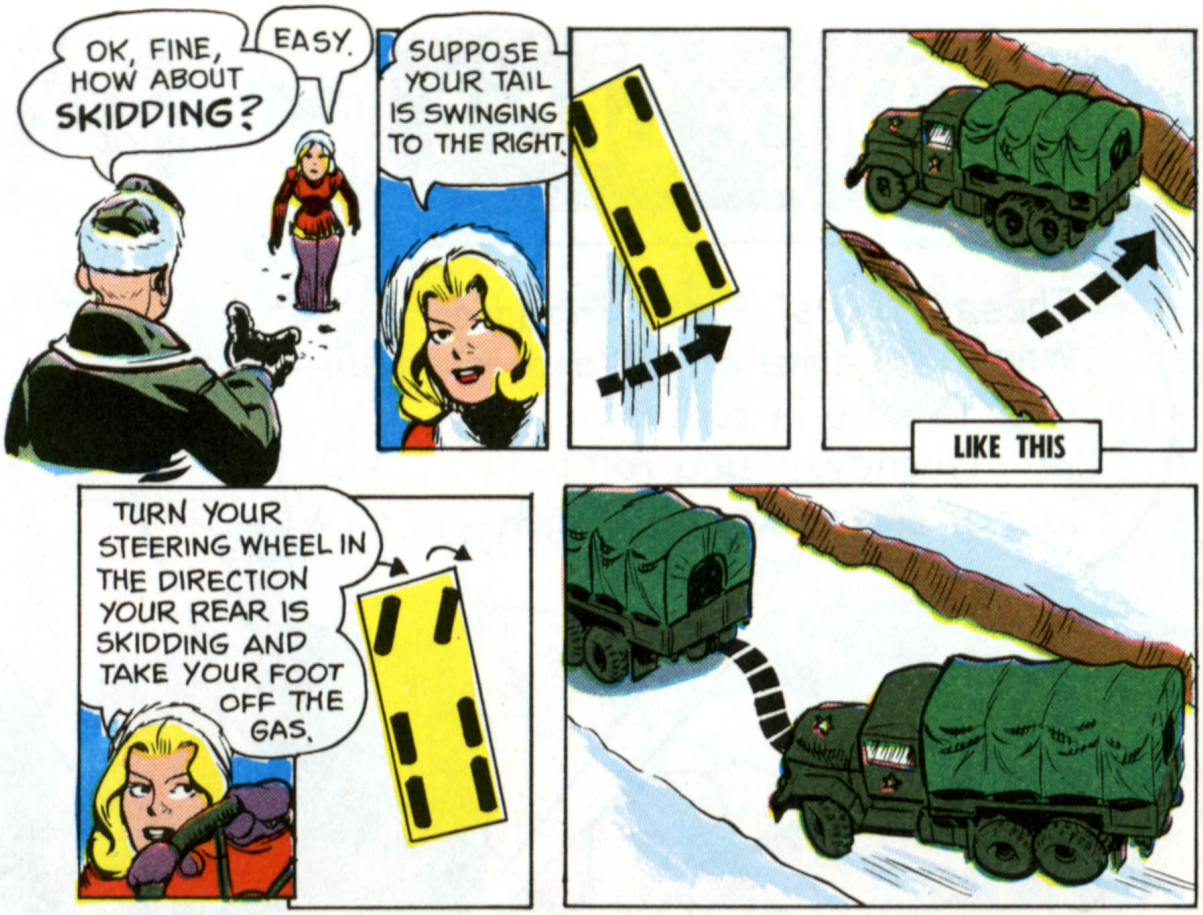
IT WORKS LIKE SO...





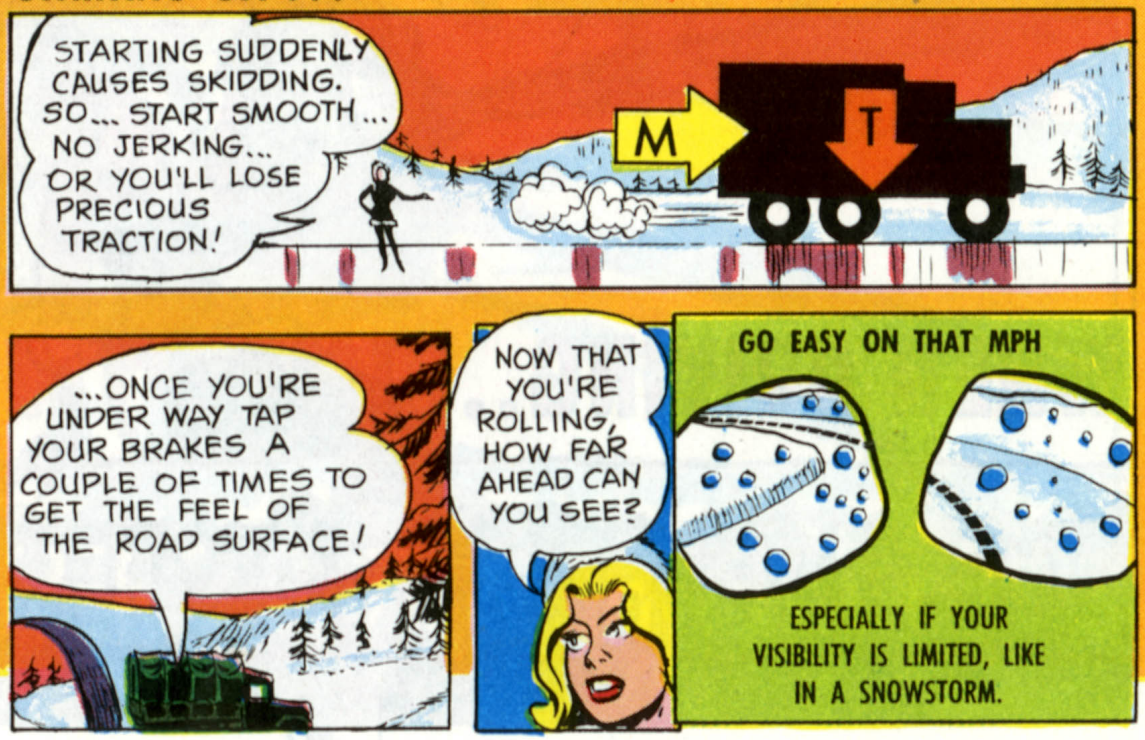


EASY SPEED CHANGES AND **EASY** BRAKING KEEP MOMENTUM FROM CANCELING TRACTION... AND YOU DON'T SKID.



DON'T OVER-STEER — JUST ENOUGH TO CORRECT YOUR SKID. KEEP YOUR **COOL**... DON'T **PANIC**

STARTING OFF...

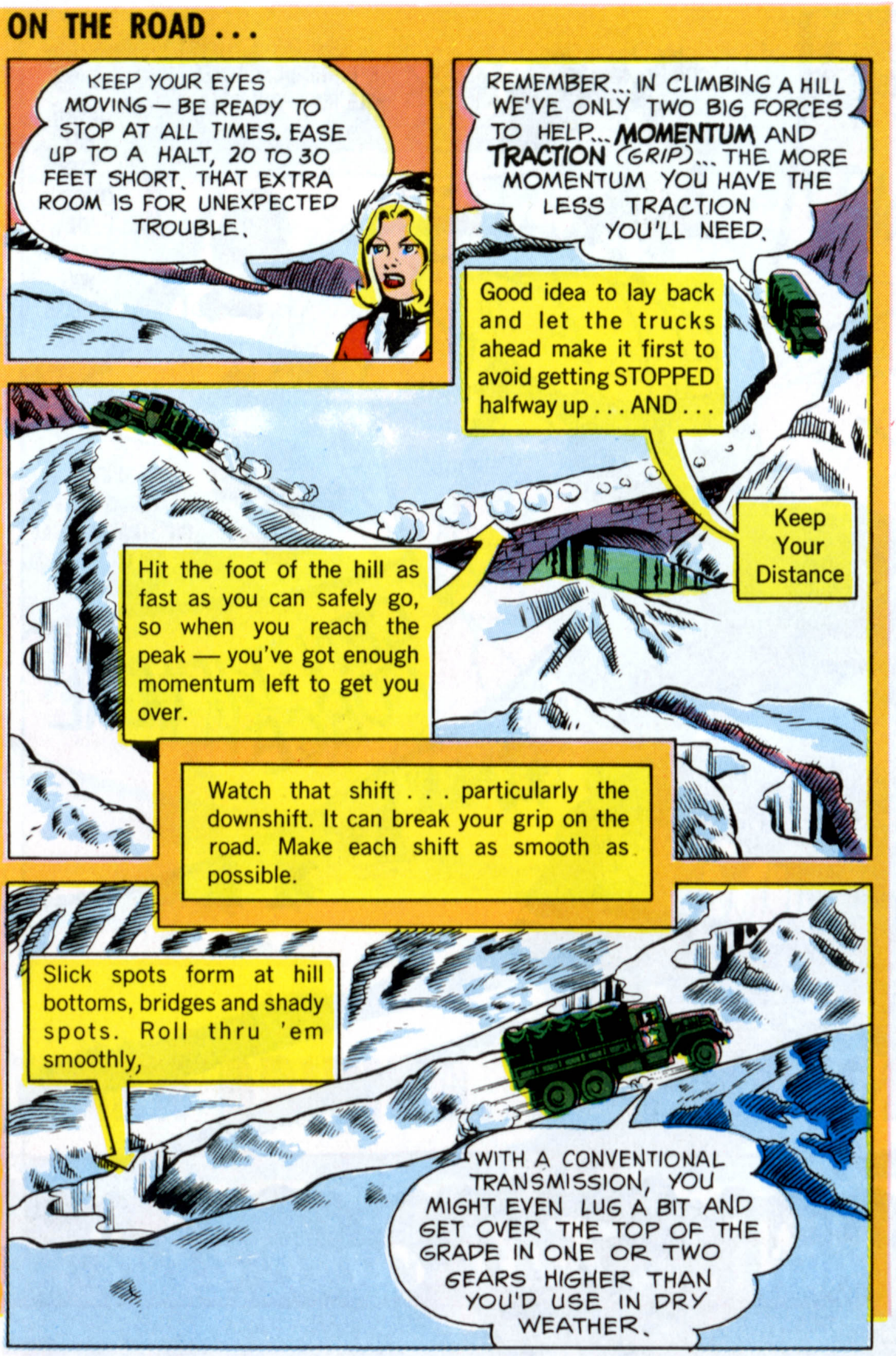


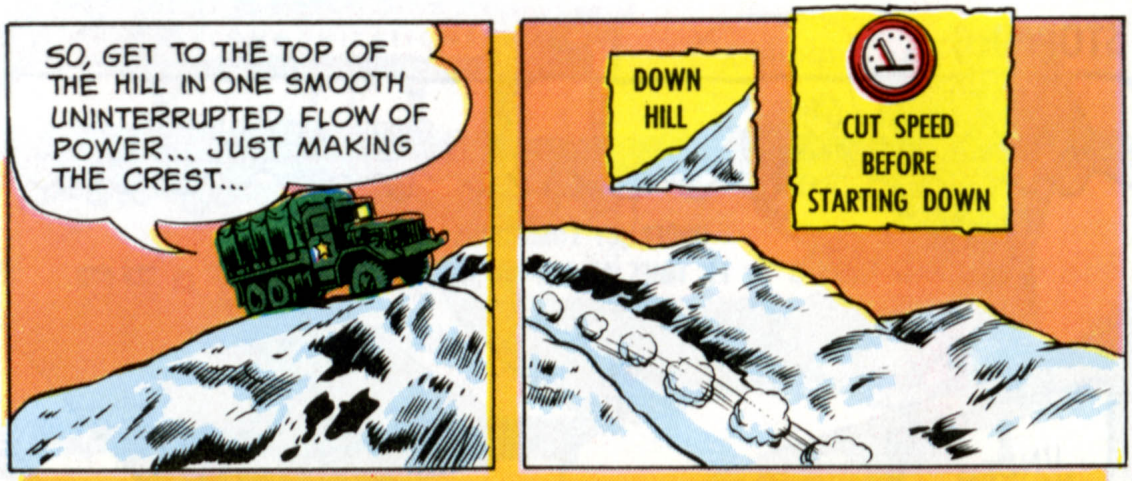
JOE'S Dope Sheet
These "Forces" can be friend or foe
When you drive on ice and in snow--
To stay in control,
Whenever you roll
Take it easy—keep traction—go slow!
MOMENTUM
WHEN DRIVING...
CON
WE HAVE THE WO D'S BEST EQ
IF YOU WANT TO DI THIS CENTERPIECE ON YOUR BUL

IF YOU WANT TO DI THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

LLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

ON THE ROAD . . .

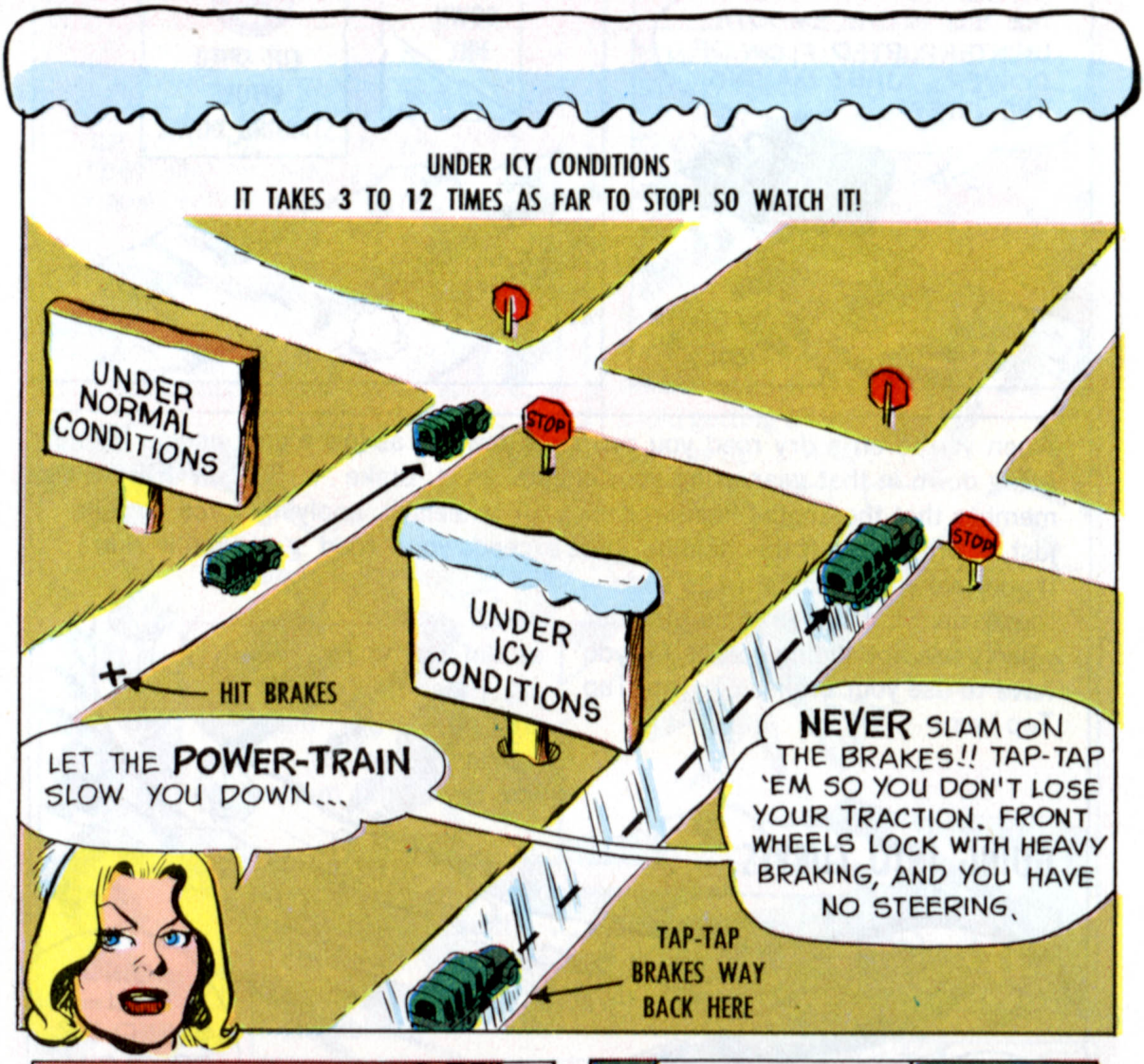

KEEP YOUR EYES MOVING — BE READY TO STOP AT ALL TIMES. EASE UP TO A HALT, 20 TO 30 FEET SHORT. THAT EXTRA ROOM IS FOR UNEXPECTED TROUBLE.
REMEMBER... IN CLIMBING A HILL WE'VE ONLY TWO BIG FORCES TO HELP... MOMENTUM AND TRACTION (GRIP)... THE MORE MOMENTUM YOU HAVE THE LESS TRACTION YOU'LL NEED.
Good idea to lay back and let the trucks ahead make it first to avoid getting STOPPED halfway up . . . AND . . .
Keep Your Distance
Hit the foot of the hill as fast as you can safely go, so when you reach the peak — you've got enough momentum left to get you over.
Watch that shift . . . particularly the downshift. It can break your grip on the road. Make each shift as smooth as possible.
Slick spots form at hill bottoms, bridges and shady spots. Roll thru 'em smoothly,
WITH A CONVENTIONAL TRANSMISSION, YOU MIGHT EVEN LUG A BIT AND GET OVER THE TOP OF THE GRADE IN ONE OR TWO GEARS HIGHER THAN YOU'D USE IN DRY WEATHER.



When you're on a dry road you can shift down to as low a gear as you like, going down in that gear using your engine as a brake . . . But **on ICE** remember that the engine holding back your wheels is applying force to 'em just as brakes do. If this holding force exceeds your road grip, you'll skid. If you feel your truck start to slide—speed up your engine until your wheels are not sliding . . . and if you have to use your brakes . . . Tap, Tap Tap ' em.

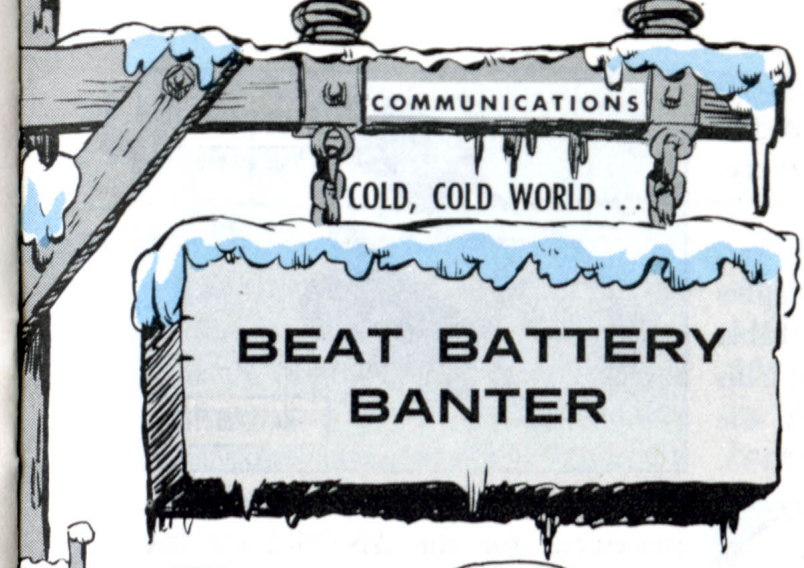
GOING INTO CURVES —

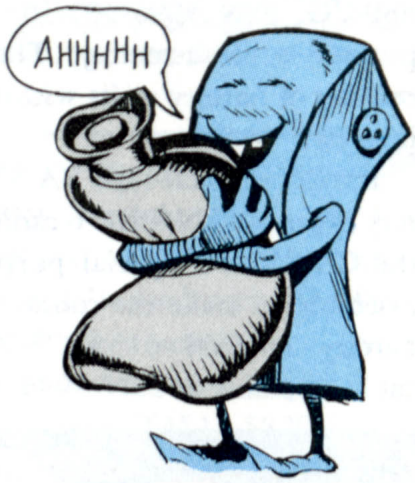
STOPPING . . .


UNDER ICY CONDITIONS
IT TAKES 3 TO 12 TIMES AS FAR TO STOP! SO WATCH IT!
UNDER NORMAL CONDITIONS
STOP
STOP
STOP
UNDER ICY CONDITIONS
HIT BRAKES
LET THE POWER-TRAIN SLOW YOU DOWN...
NEVER SLAM ON THE BRAKES!! TAP-TAP 'EM SO YOU DON'T LOSE YOUR TRACTION. FRONT WHEELS LOCK WITH HEAVY BRAKING, AND YOU HAVE NO STEERING.
TAP-TAP BRAKES WAY BACK HERE

OK, CONNIE, WE'RE READY TO ROLL. ANY MORE TIPS?

TIPS... YEAH, KEEP BOTH HANDS ON THE STEERING WHEEL ... I'LL DO THE SHIFTING.





When it's as frigid as a well-digger's ankles, that's the time cold-weather batteries tangle with Jack Frost for control of your communications system.

You'll naturally want to give lotsa warm-and-loving consideration to your squad radio, AN/PRC-88 (AN/PRT-4, AN/PRR-9), your man-pack radios, AN/PRC-25, AN/PRC-77, AN/PRC-28, AN/PRC-6 and AN/PRC-8 through -10.

And you'll want a few licks of that ever-loving to rain down on the AN/GRC-125 and AN/GRC-160 if you're usin' 'em man-pack style.

That means warm-and-loving batteries to keep your radio set communicatin' past the snowflakes.

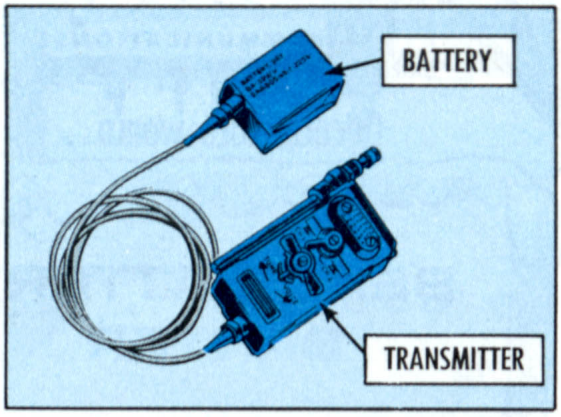
You'll get that cold-weather power for your AN/PRC-8 through -10 by using BA-377/U low temperature battery, FSN 6135-823-2728, and the MX-3568/PRC adapter, FSN 5820-856-3574.

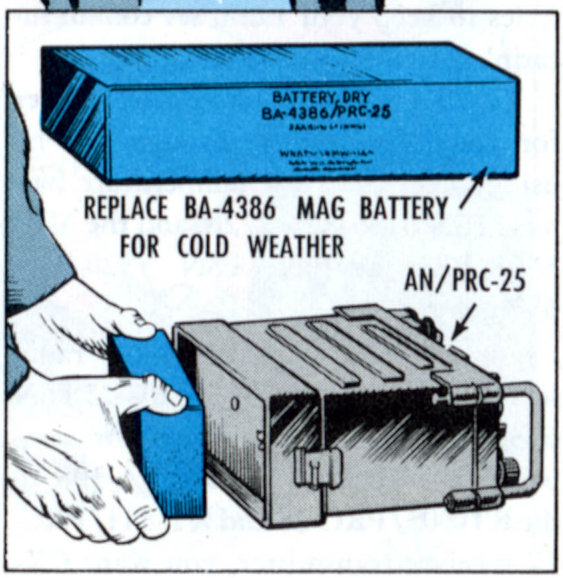
For the AN/PRC-25 and -77 radio sets, you need the BA-398/PRC-25, FSN 6135-926-3503, battery for low temperatures. To hook up the BA-398 to the RT-505/PRC-25 and RT-841/PRC-77 receiver-transmitter, you want CX-

P.S. MORE

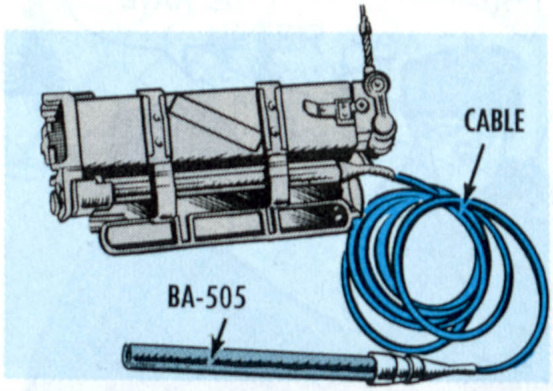
8808/G, FSN 5995-901-3647, special purpose cable assembly. The BA-398 consists of battery units within a carrying vest.

It takes the vest-type BA-376/U battery to power AN/PRC-6 radio set, plus the CX-8281/U special purpose cable assembly to make the connection. This battery is FSN 6135-823-2727; the cable assembly is FSN 5995-889-1113.





There's no cold-weather battery replacement for the AN/PRT-4's BA-399/U dry battery FSN 6135-926-0845 —and it's the same deal on the BA-505/U battery FSN 6135-926-0844 for the AN/PRR-9 receiver. There are special cable kits, though, CX-11990/PRR-9 (FSN 5995-179-8256) and CX-11991/PRT-4 (FSN 5995-179-8257).



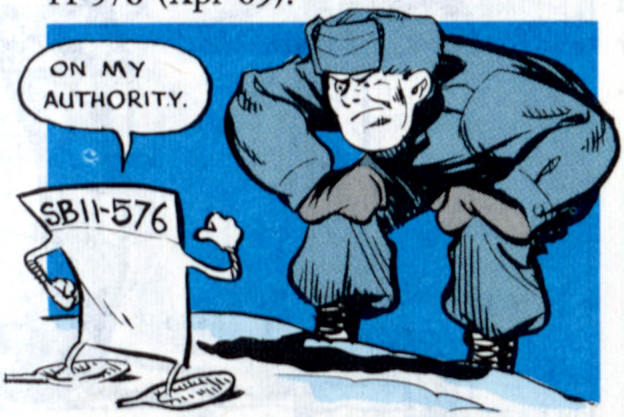
What you do with these 2 squad radio set batteries is pre-heat 'em in a warm room or hold 'em against your body to unchill 'em. Carry some spares inside your clothing, too.

In case you're usin' the new magnesium battery on the AN/PRC-6 (BA-4270/U, FSN 6135-930-0031) or AN/PRC-25 and -77, AN/GRC-125, and -160 (BA-4386/PRC-25, FSN 6135-926-8322), you still switch to cold-clime batteries for matching weather, even though the magnesium units are gung-ho for low temperatures.

A point to remember: If you do have the cold-climate batteries, you warm these vest-encased cuties under your clothing.

They'll translate that warmth to operational oomph, when it's time to give their all. Matter o' fact, these vest-type power pods have been developed to take advantage of body heat by keepin' dry cells above 50 degrees F in sub-freezing areas.

Your authority to order the cold-weather batteries and accessories is SB 11-576 (Apr 69).



Installation instructions for the batteries are in Ch 5 (Jun 68) to TM 11-296, AN/PRC-6; Ch 2 (May 63) to TM 11-5820-292-10, AN/PRC-8 through -10a, AN/PRC-28, TM 11-5820-398-12, AN/PRC-25, TM 11-5820-667-12, AN/PRC-77 and TM 11-5820-498-12, AN/GRC-125, -160.

Cable assemblies 38 inches long connect the AN/PRC-88 radio units and the batteries when the batteries are carried or worn for warm-up.

You can get instructions in upcoming changes to TM 11-5820-549-12 on special purpose electrical cable assembly (CX-11990/PRR-9, FSN 5995-179-8256), used with BA-505/U or BA-4505/U (FSN 6135-935-8630) on the AN/PRR-9 receiver, and on CX-11991/PRT-4 cable assembly (FSN 5995-179-8257), used with BA-399/U on AN/PRT-4 transmitter. A parka harness and accessories are spelled out in Ch 5 (Jul 69) to TM 11-5820-549-12. The 4 in front of the 4505 and other portable set batteries is the magnesium version.

You can get instructions on CX-8281 cable assembly, FSN 5995-889-1113, used with BA-376/U battery on the AN/PRC-6, in Ch 5 (Jun 68) to TM 11-296.

In Ch 2 to TM 11-5820-292-10 there are instructions on the MX-3568/PRC battery adapter used with BA-377/U on the AN/PRC-8, -8a, -9, -9a, -10, -10a and -28.

TM 11-5820-398-12 gives the info on the CX-8808, used with BA-398/PRC on the AN/PRC-25 and AN/PRC-77. TM 11-5820-498-12 gives info for the AN/GRC-125 and AN/GRC-160.

Be sure to match the BA-376/U with the AN/PRC-6 radio and the CX-8281 cable assembly, because the CX-8281 plug also fits the BA-377/U battery, and you could damage your radio set using the wrong battery.

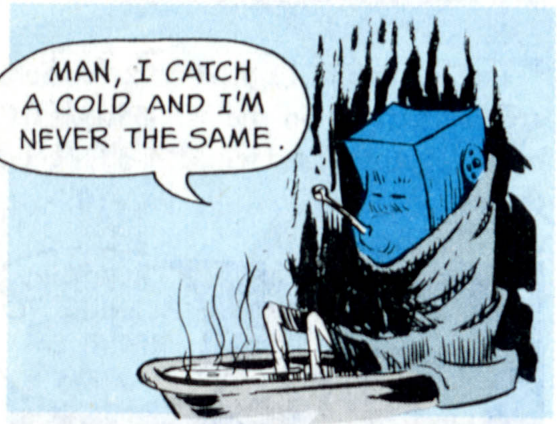
PS MORE

While you're taking care of your cold-time batteries—and vice versa—bear in mind that your radio set needs a helping hand, too . . . in other departments. Cold departments.

The help it needs is heat, external.

If you're set up in a shelter, or a tent, and you're equipped with a heater, no problem. Just keep the set warm and dry.

For the last gasp in protection from icy air, make use of a tarpaulin or blanket as a shield against wintry blasts when the door is opened. Same thing goes for a radio set mounted in a closed and heated vehicle; the only problem's the icy blast from the door.



One thing to remember: In low-degree weather you can't trust your set's ON-OFF switches.

Which means that merely turning off your radio set for your engine start may not hold back power surge.

What you do in such a case is disconnect the set from the power supply until the engine of your vehicle is running.

Remember that everything—yes, everything—on or in your radio set can be mighty brittle and vulnerable in cold, cold weather.

Handle the situation warmly.

Twice as good as anything before it is a lot better than it ever was.

How's that again?

Well, actually, twice as good is modest when you're talking about the BA-4386/PRC-25 magnesium batteries, now in hard action SEA way.

In certain circumstances, they're a lot gooder. Like storage . . . or hot weather performance.

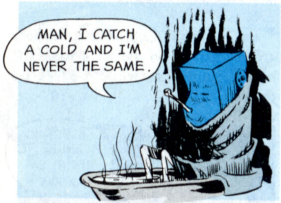
Anyway, they're coming everybody's way eventually, so here's for a hard look.

While you're taking care of your cold-time batteries—and vice versa—bear in mind that your radio set needs a helping hand, too . . . in other departments. Cold departments.

The help it needs is heat, external.

If you're set up in a shelter, or a tent, and you're equipped with a heater, no problem. Just keep the set warm and dry.

For the last gasp in protection from icy air, make use of a tarpaulin or blanket as a shield against wintry blasts when the door is opened. Same thing goes for a radio set mounted in a closed and heated vehicle; the only problem's the icy blast from the door.



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The BA-4386 (FSN 6135-926-8322) replaces the BA-386, which powered the PRC-25 series sets from way back.

The **average** life of the BA-4386 is twice as long as the BA-386, or 55 hours. Actually, in a lot of cases, it's lasted much longer in field use.

Which is your clue not to toss it when it racks up only 25 or 30 hours use.

And this dude'll give good performance anywhere from 0 to 160 degrees F. Compare that to the "poor" to "fair" rating of the -386.

Why, man, you can store the -4386 for a year at 130 degrees F and still get more than 80 percent of its capacity. Try that with the -386 and you'd kill it in little more than a week.

Which is another point. The -4386 does not need and **does not get** refrigeration in storage or in transit.

You get the idea, so the point won't be belabored.

SEA has preference on magnesium batteries, but increased production will make 'em available all over.

The BA-4505 has already made the scene for the AN/PRR-9 squad radio receiver, replacing the BA-505.

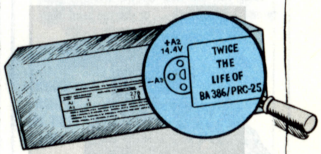
Likewise, or on the way, is the magnesium battery for the AN/PRC-6 radio set, the BA-4270/U, FSN 6135-930-0031.

Performance is about comparable to that of the BA-4386 vs the BA-386.

When shipping batteries, keep 'em in their sealed plastic bags and individual cardboard boxes. Helps protect against moisture.

There's a little clue over the receptacle on the BA-4386 which reads: "TWICE THE LIFE OF BA-386/PRC-25."

So let it.



LONG LIFE CLUE

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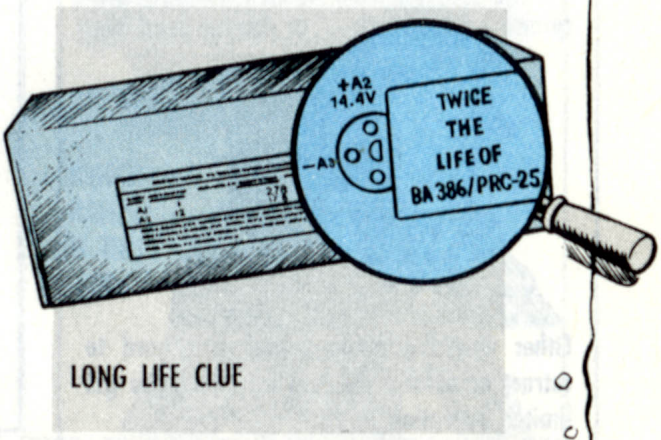
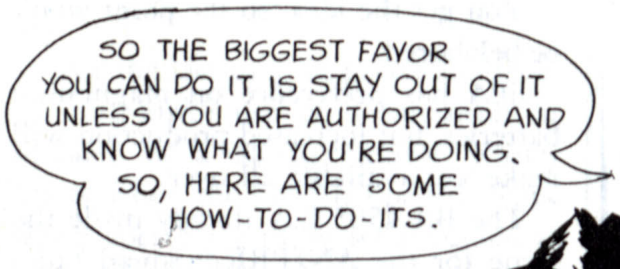


LONG LIFE CLUE

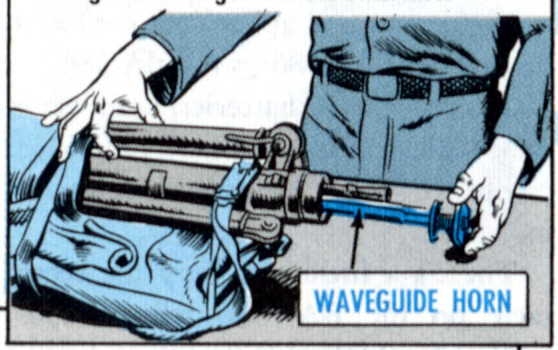
PIPSY-5 POINTERS

Considering all the things your AN/PPS-5 radar set does for you, the things you have to do for it are small indeed.

Trying to do something you're not qualified to do can cause a heap of damage.

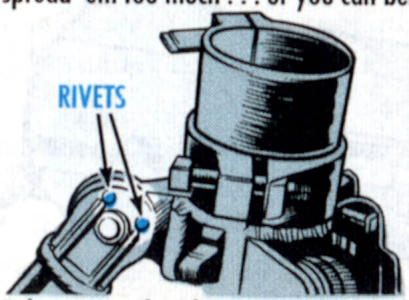


When you're about to rig the tripod assembly (MT-2958) open the tripod legs slightly before you remove the AS-2024 waveguide horn and the telescope. There isn't enough room to get 'em out otherwise.



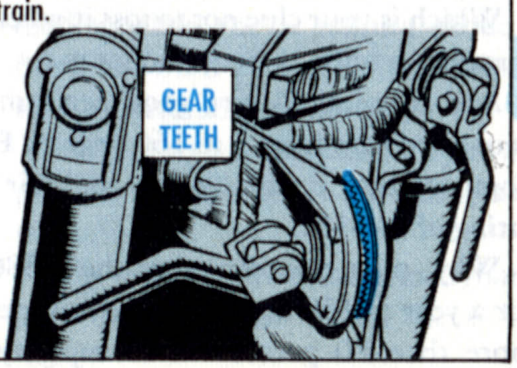
Now, easy with the tripod legs when you spread 'em.

Like, you can bust up the rivets if you spread 'em too much . . . or you can bend 'em.



Either way the damage makes it hard to retract or extend the legs . . . and you get limited operation.

Be sure the column assembly (MX-7565) and tripod leg gear teeth mesh as you insert the column and before you tighten the wing screws. Otherwise, you can damage the gear train.



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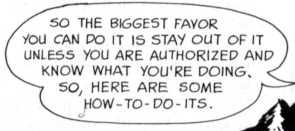

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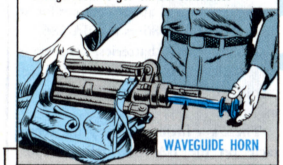

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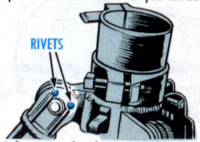

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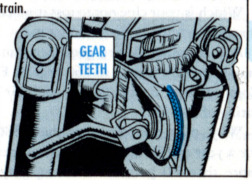

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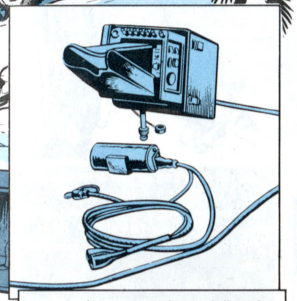
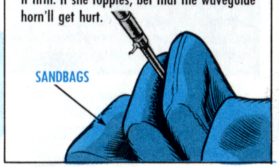
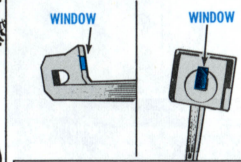


Since the set is top-heavy, ballast the tripod legs with sandbags or whatever to keep it firm. If she topples, bet that the waveguide horn'll get hurt.



While we're with the waveguide horn, remember that those aperture windows on each end have gotta be intact. First, because they allow RF energy to pass, and second, they keep out dirt and moisture.

Treat 'em with TLC, but if you accidentally break one, get it replaced.



When it comes to the pins on the male connector of the CX-8666 cable , line 'em up straight, slip 'em in straight.

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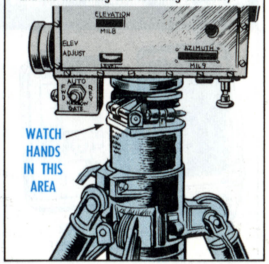

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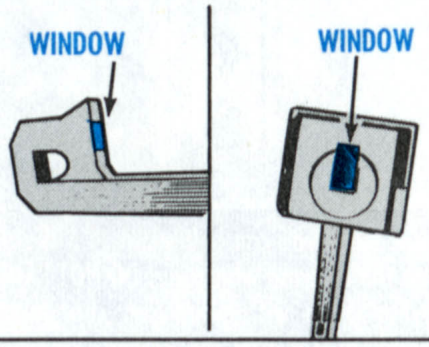

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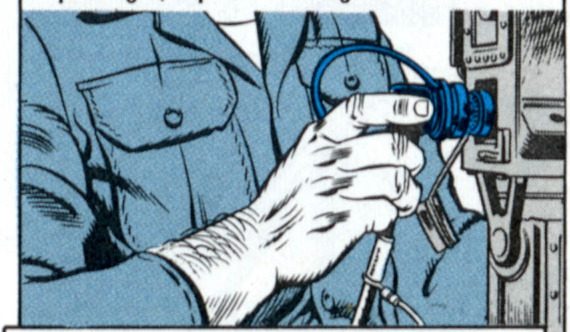

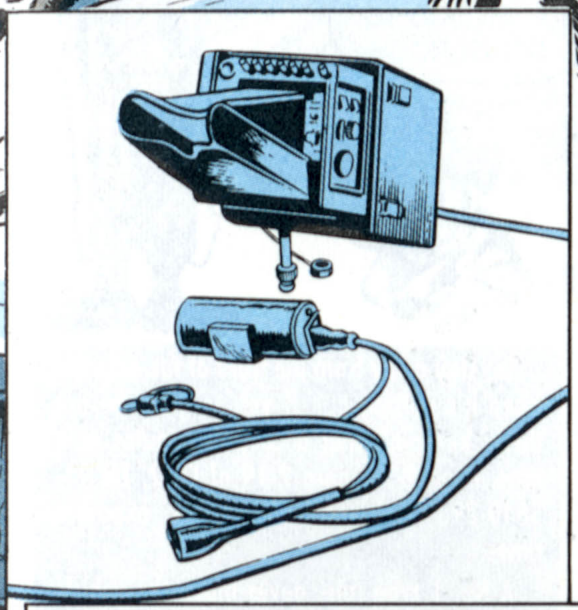

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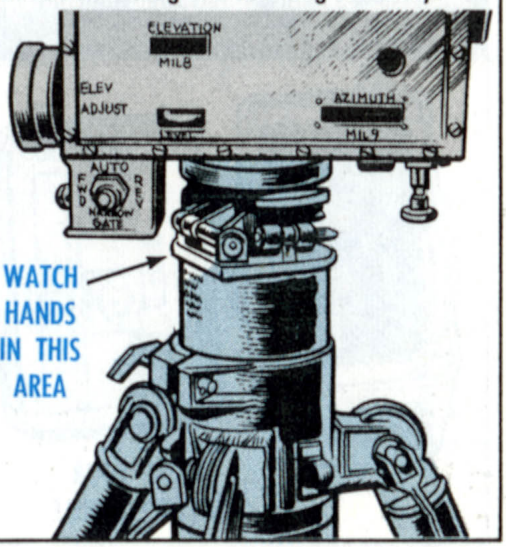

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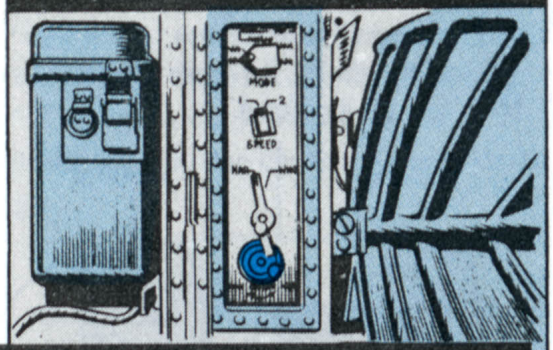
PS MORE

And, when you're operating the range crank, stop when you feel resistance. Forcing the crank can jam the range counter.

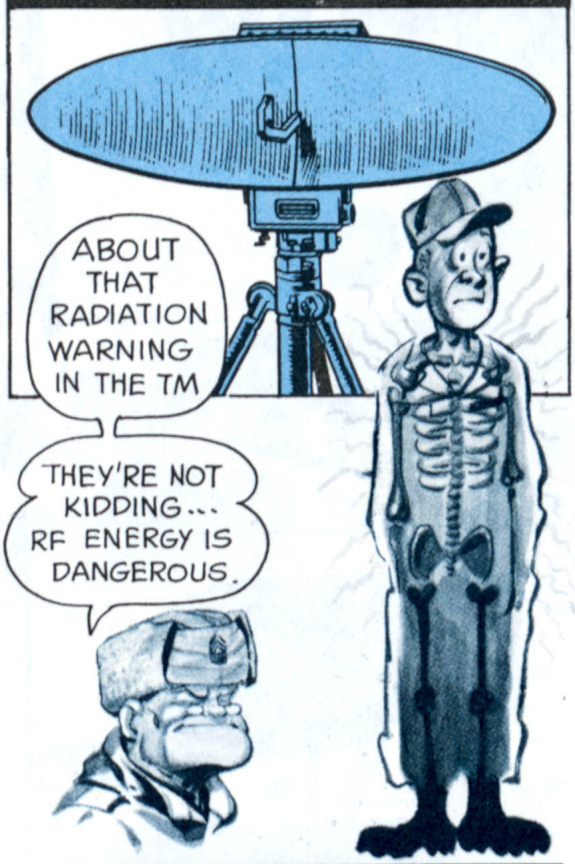


Some signs you can believe in . . . like the one on the antenna which says DO NOT PAINT. Prettying it up with paint can change the electrical responses of the antenna and give you wrong readings. Same "heed it" message goes for the radiation warning on the side of the receiver — transmitter.

'Nother thing you can believe: rough handling of the BB-622 battery can puncture the cells, kill the battery and maybe injure you . . . from splashed electrolyte.

TREAT YOUR BATTERY GENTLE

So, you're ready for business, you're transmitting, and you can relax. Well, not exactly. Stay 'way from the transmitting antenna unless it's for sure necessary.

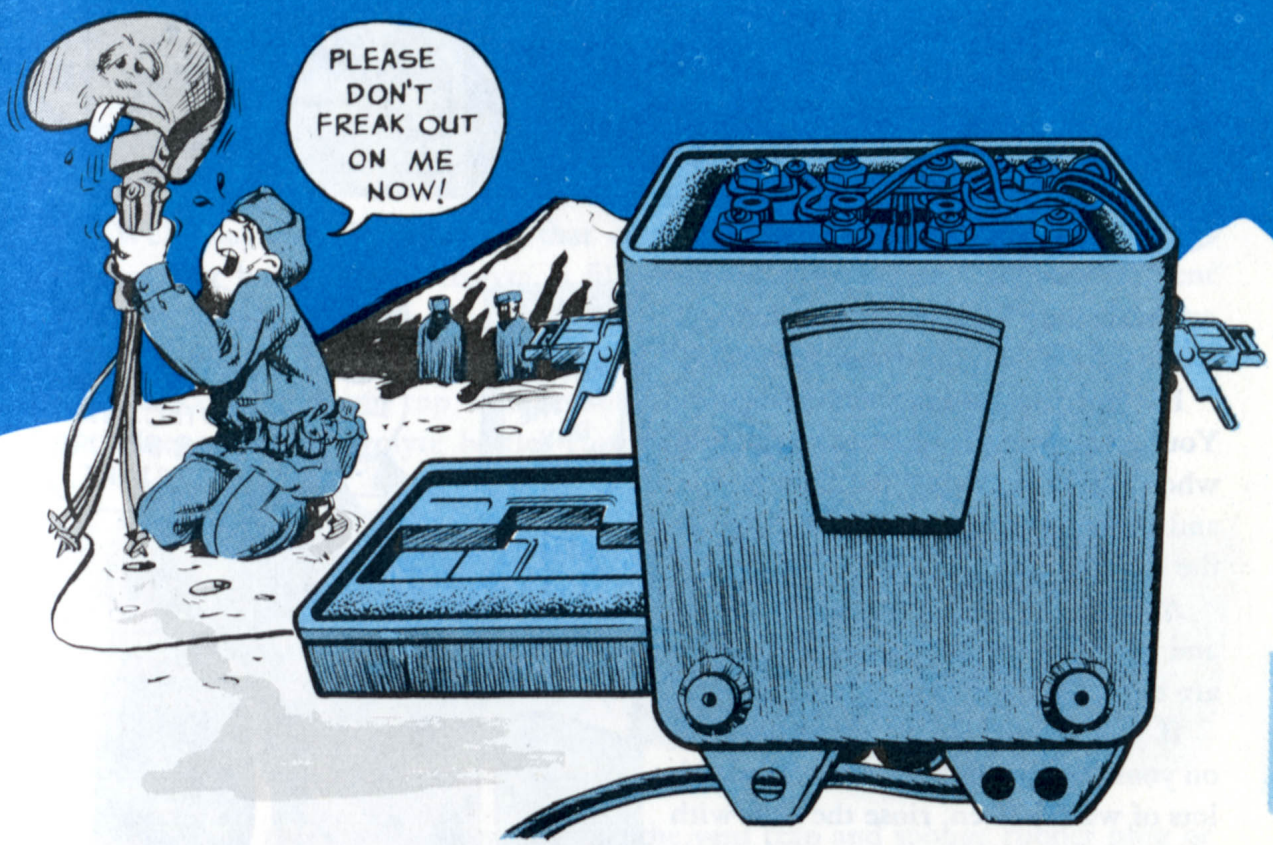


So, stay away from the front of the antenna when it's putting out. If you've gotta be out there, keep it under a coupla' minutes at a time. Page 2-16, para 2-19 of Ch 2, TM 11-5840-298-12 gives you specific exposure times.

A No. 1 type rule: never move the vehicle while the radar set is mounted on its tripod. Take it down.

And, if you're about to give it a ride in a 1/4-ton truck, or in any other way shake it up, put the set on a pad. A salvage mattress or anything else that'll absorb the shock is better than the bare bottom of a truck.

BB-622 KNOW-HOW KEEPS YOUR PIPSY PERKIN'



You can keep your Pipsy perkin' when you get its bat'ry workin'.

A step-by-step poop sheet is packed with each BB-622()/U zinc-silver battery for your AN/PPS-5 radar set.

If you try your own short cuts chances are great your batteries will make salvage long before they're due to die.

Following are a few pointers on getting your battery to put out like the pro it is:

KNOW YOUR BATTERY

All models of the BB-622 have an operating voltage of 6. End of charge voltage is 8.1, and end of discharge is 5.2V.

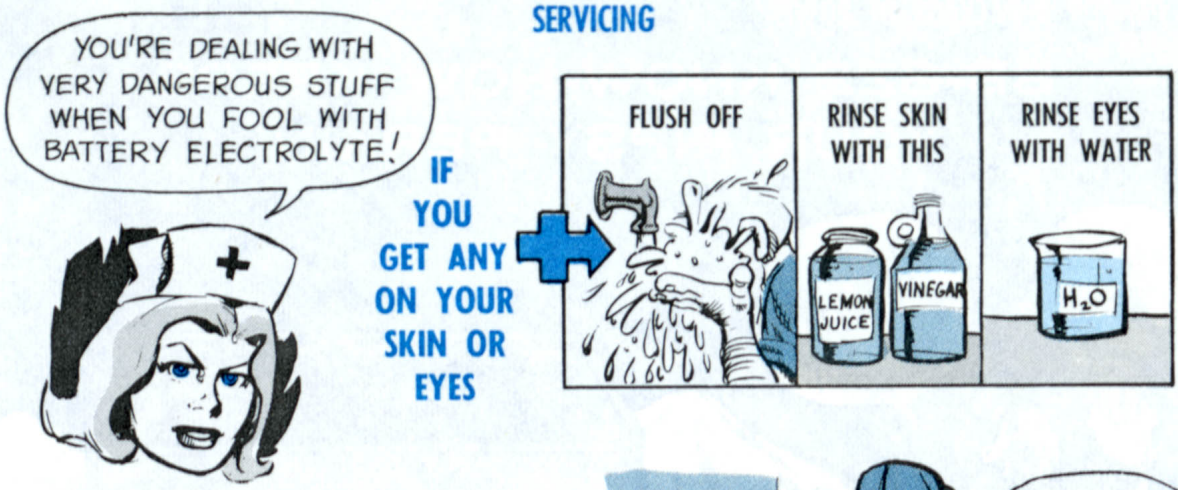
Cost is more than $200 per battery (which makes it no two-bit toy).

The BB-622 plain model has 60-amp-hr capacity and can be charged and discharged 25 times (or, like they say in the trade, it has a life of 25 cycles).

The BB-622A and -B can be charged and discharged 100 times each (cycles, baby). The A model rates 65-amp-hr and the B goes 80-amp-hr. That amp-hr bizz, in simple steps, means that the B model f'rinstance'll operate 8 hours at a 10-amp draw.

PS MORE

SERVICING



The battery's electrolyte is a corrosive solution of potassium hydroxide.

For you, that means watch your skin. You gotta protect your eyes and skin when you're servicing the battery . . . and know where the medics are if you're the careless type.

An alkali-proof apron, rubber gloves and splash-proof goggles or face mask are the servicing uniform.

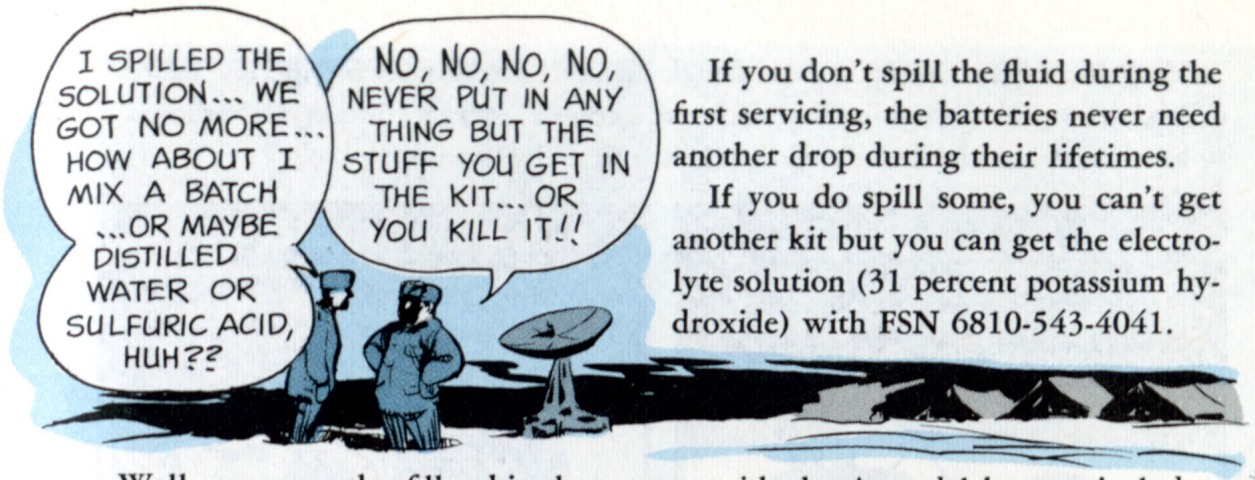
If you should splash the electrolyte on your skin flush it off right now with lots of water. Then, rinse the skin with vinegar, lemon juice or a mild acetic acid mix and re-flush with water. If burns develop get to a medic.

Medical aid is a must if you splash the mix in your eyes. Flush 'em good with water until you get help.

STORE THEM DRY

If you're not going to use the batteries for a month or more, don't fill 'em or charge 'em. Store 'em dry. They last a lot longer, and it's the easiest way to store 'em since they come to you dry.

Each battery comes with a kit which has 4 bottles containing the exact amount of electrolyte you need.



If you don't spill the fluid during the first servicing, the batteries never need another drop during their lifetimes.

If you do spill some, you can't get another kit but you can get the electrolyte solution (31 percent potassium hydroxide) with FSN 6810-543-4041.

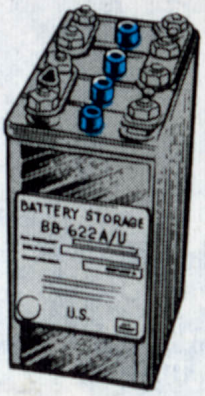
Well, anyway, the filler kit that comes with the A model battery includes four 6-oz bottles of electrolyte, a filler cap for said bottles, 2 electrolyte vent traps, 4 vent cleaners, absorbent cotton, a pair of tweezers, 4 spare sponge rubber plugs, a battery record card and operating instructions. The B model has a screw type vent cap with no rubber plug spares or vent traps.

Keep those electrolyte bottles closed till you're ready to use 'em.

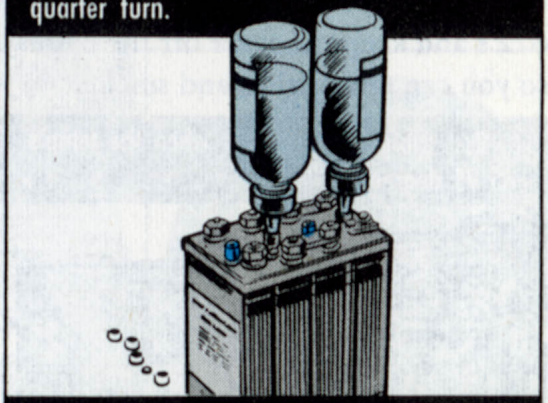
AND, AWAY WE GO

So you're ready to use 'em. Remove the vent trap and sponge rubber plug or the screw vent cap from each cell. Set 'em aside, because you'll use 'em again.

Take the cap off one electrolyte bottle, remove or puncture the seal and screw in the filler cap (each bottle has exactly enough electrolyte for one cell).



Insert the tip of the cap into the cell vent hole and tighten it by twisting it clockwise a quarter turn.

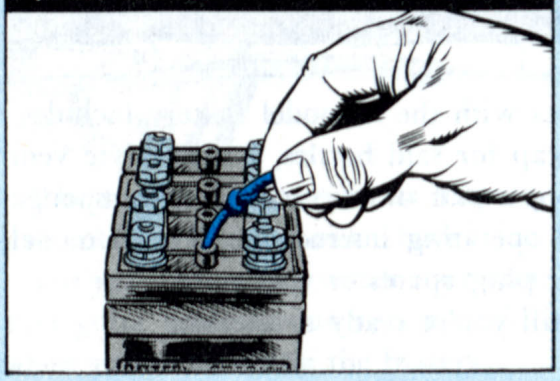


Squeeze the bottle gently for a few seconds, release, and squeeze again until all the liquid is transferred to the cell.

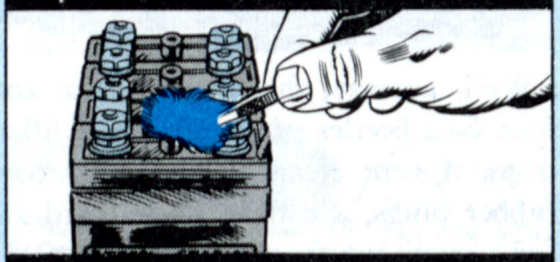
P.S MORE

If the liquid repeatedly is drawn back into the bottle, wait for the level in the cell to drop and try again. It could take a coupla' extra minutes. Just remember to keep the bottle in the cell until all the electrolyte is transferred.

When the cell's filled, insert a knotted vent cleaner into the cell vent hole as far as it'll go. Turn it full around one time. Repeat the process in each cell after you fill it.



Use the tweezers and cotton to dab off electrolyte that might've splashed away from the vent holes . . . and then replace the sponge rubber plug and electrolyte trap . . . or vent cap.



Then, on to the next cell, and the next, and the next.

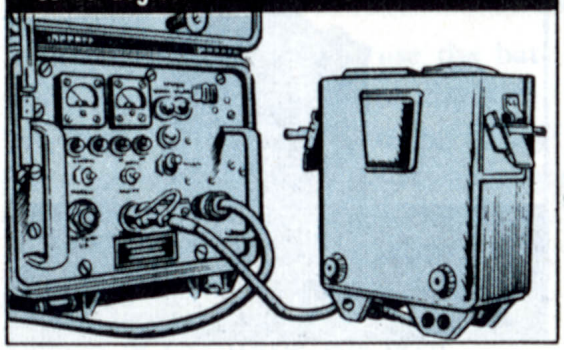
Note: You get only two filler caps, so take 'em off before you toss the empty electrolyte bottle. You can fill 2 cells at once.

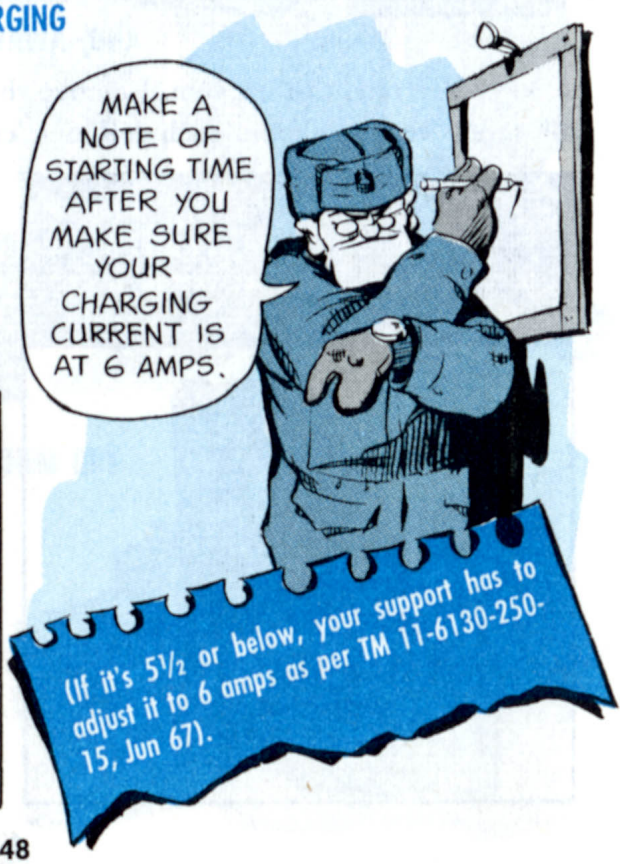
When you've filled the cells let the battery stand upright for 2 to 3 days in order to soak up the electrolyte (48 hours for the A & B models; 72 hours for the plain model).

CHARGING

When the fill'n-soak operation is finished, connect the battery to the PP-4127 charger . . . which supplies a constant 6 amps and stops when the full charge voltage of 8.1 is reached. **Never** use anything else to charge your BB-622's and keep the cover off the battery so you can see gassing and smoke.

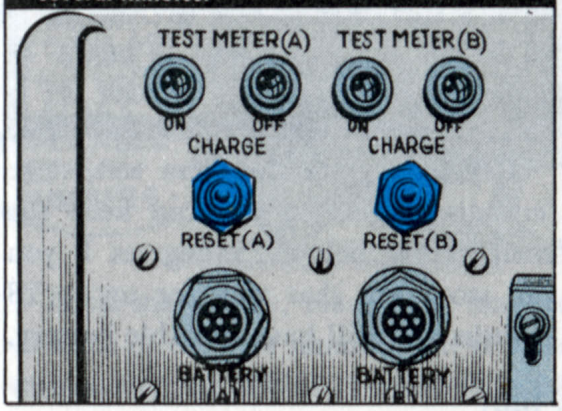
Best charging results are when the temp's 65-95 degrees F.





To charge fully the first time, 8 or more hours are needed . . . that's why you note the starting time.

When the PP-4127 cuts off, reset it. If the battery's fully charged it'll stop again within several minutes.



If the charger stops in less than 8 hours and keeps cutting out when you reset it, clean the cell tops and terminals; be sure the vent holes aren't clogged, and replace any sponge rubber plug which might've become too saturated with electrolyte. You can also wash, dry and replace the same plug. Check the top terminal nuts for tightness.

If the battery still doesn't charge properly, turn it in.

Should charging time exceed 16 hours on the plain and A models, suspect a short. The B model may take 24 hours. Heavy gassing in any of the 4 cells, with the charger operating, is a good clue that a cell's shorted.

Turn in shorted batteries.

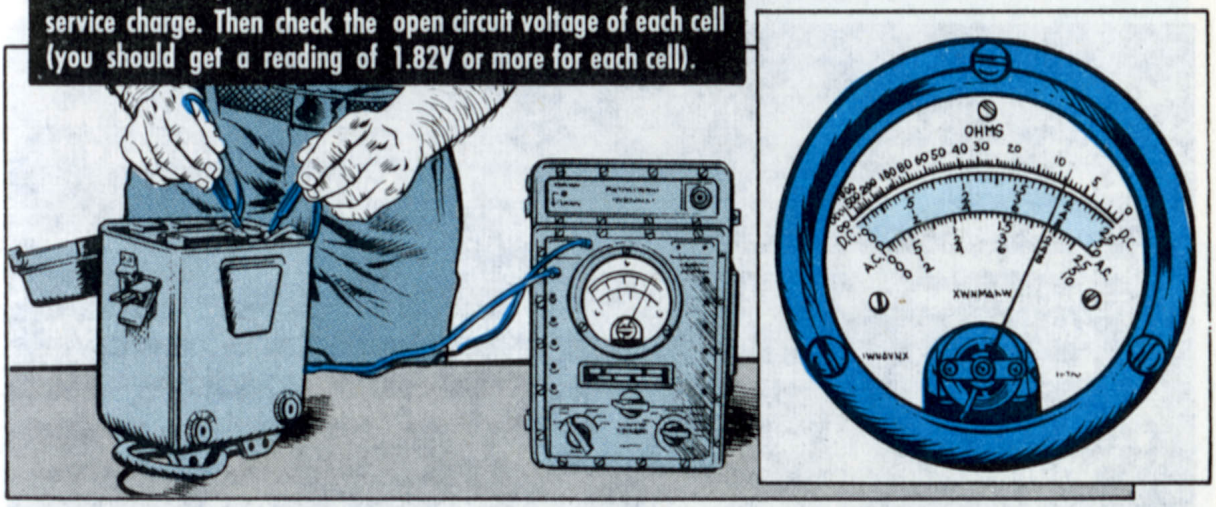
IN-SERVICE CHARGING

Instructions on the charger itself clue you on re-charging the battery once you put it in service. Just remember to reset the charger once it kicks off, to be sure you've fully re-charged the battery.

Just like on the initial charge, it'll kick off in a coupla' minutes if the battery's up. In-service charging should take a minimum of 6 hours. Otherwise, turn it in.

SERVICEABILITY

Let the battery stand for 6 to 12 hours after the initial or in-service charge. Then check the open circuit voltage of each cell (you should get a reading of 1.82V or more for each cell).

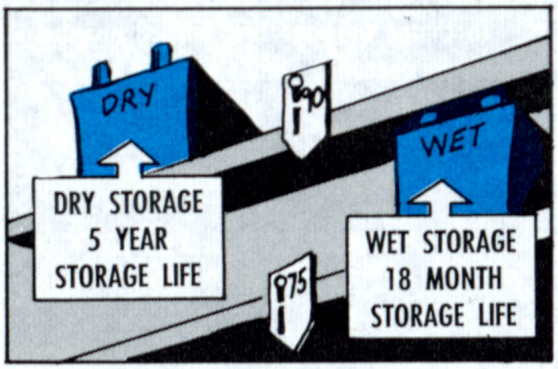


P.S. MORE

The storage life of the battery is indefinite. If it can put out 50 percent or more of original capacity, it's alive.

Dry storage (which is preferred) should give up to 5 years' shelf life, depending on whether you can keep the storage temperature below 90 degrees F.

Storing batteries with electrolyte and in the charged condition knocks them in the head. At 5 percent per month deterioration, you can kill a battery in 10 months . . . the time it takes to reduce them to 50 percent of original capacity.

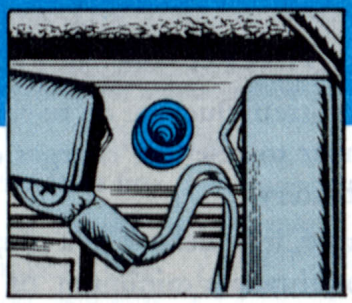


If you've gotta store 'em wet, store 'em discharged. If you can keep the temperature below 75 degrees F you can store 'em that way for up to 18 months and still have a usable battery.

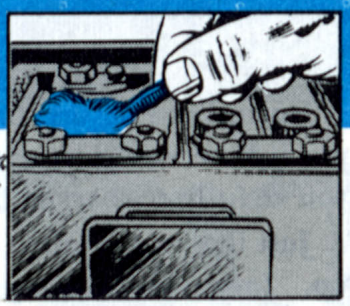
ODDS & ENDS

To avoid accidentally shorting the battery, use insulated tools on it or when working near it. A double layer of electrical tape or 2 coats of varnish will give you the insulation you need.

When the battery's in service, give the vent holes an occasional check to be sure they're open.



Sponge up excess electrolyte from the cells, and dry up saturated sponge plugs when necessary.



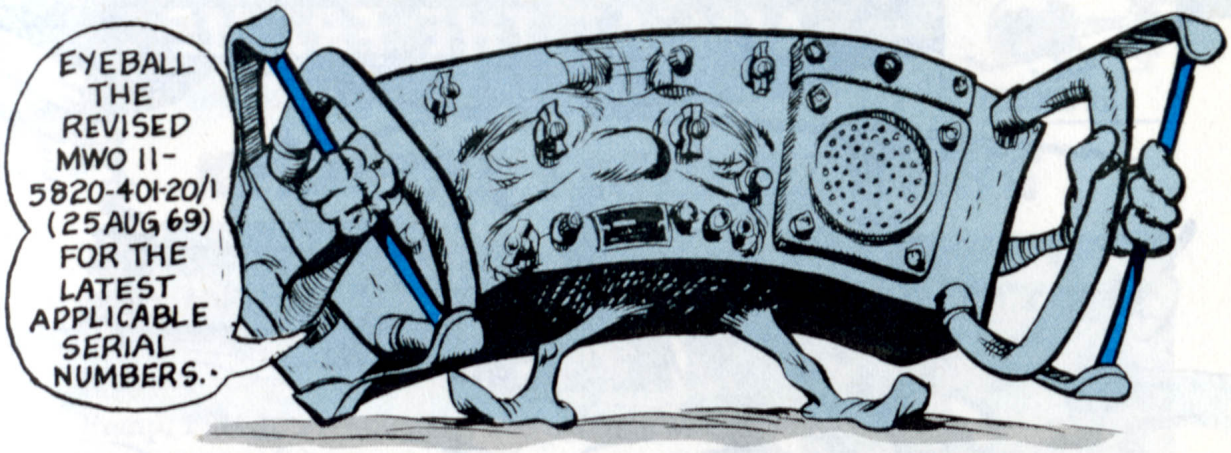
Check the top terminal nuts periodically. They should have 30 to 40 in-lbs of torque on them.

The nut on the base of each cell terminal is preset. Forget it.

PRECAUTIONS

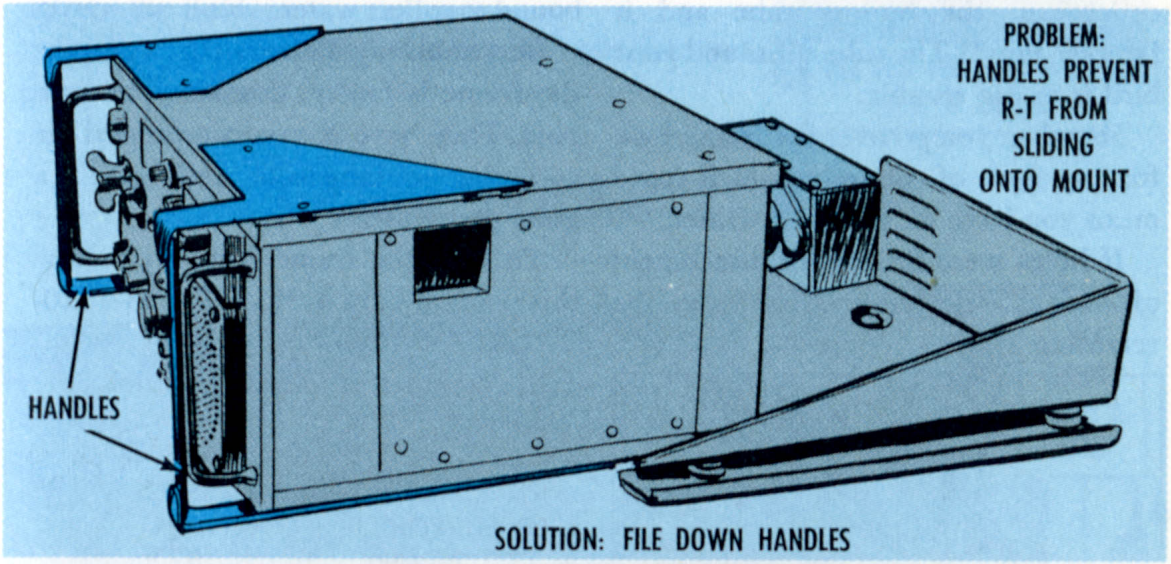
1 — Get all of the electrolyte out of the filler bottles and into the cells.
2 — Allow the filled battery to soak for the required time.
3 — The first charge activates the battery.
4 — Reset the charger when it cuts off to assure a full charge.
5 — Keep the top of the battery clean and remove all whitish deposits.
6 — Fill in the record card and return it to USAECOM.
7 — Use only that amount of electrolyte which comes with the filler kit (it should last the life of the battery).
8 — If you should spill electrolyte, use nothing but FSN 6810-543- 4041.
9 — Forget about "rejuvenating" the battery or trying to balance the cells.
10 — The PP-4127/U is the **only** charger for the BB-622( ).

HANDY HANDLE HANGUP



Look sharp now, man! You may find a slight overhang on one or both sides of some of the new handles you've installed on your RT-524 or RT-246 receiver-transmitter per MWO 11-5820-401-20/1 (Jan 69).

That's what's goofin' up the fit between the R-T and the MT-1029 mount. On some of the modified components you can't push the R-T all the way back on the MT-1029 after you've installed the handles.



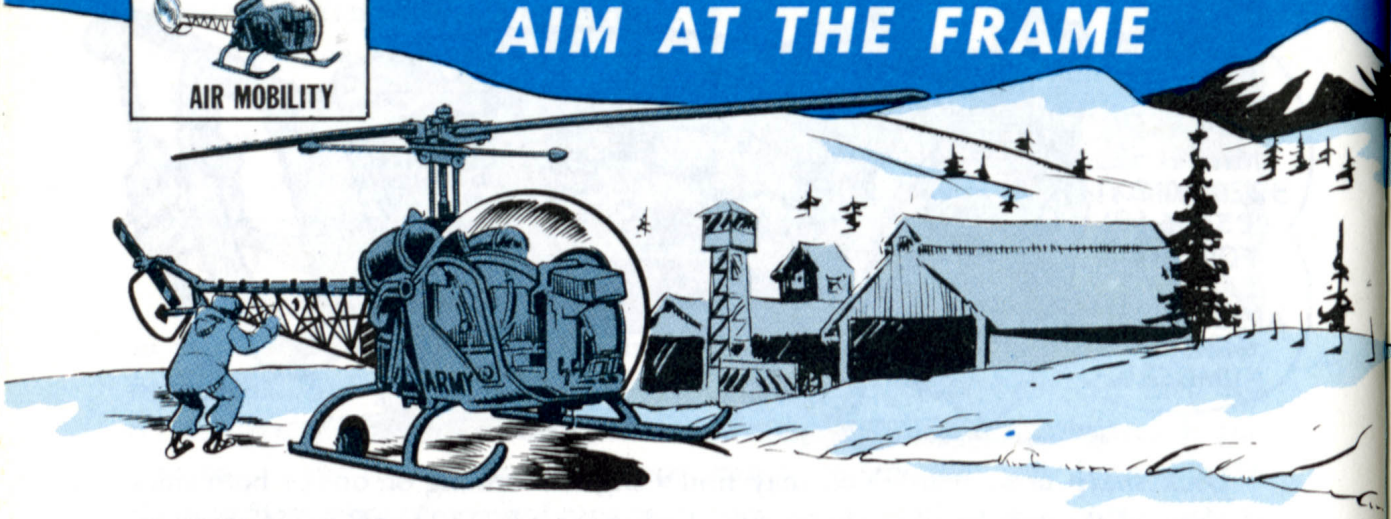
Take these R-T units with handles installed to your DS and have them lightly file the outside edges of the lower portion of the handles until the R-T unit slides snugly into the mount.

ANTENNA ALERT

Lower whip sections for the AT-912 and AS-1729 antennas are not interchangeable, in case you're trying the big switch. The AT-1096 (for AT-912) and AS-1730 sections have different threads. If your requisition for an AT-1096 was kicked back as "out of stock," try again. New stock has been procured.

COLD WEATHER LOOK . . .

AIM AT THE FRAME



Before the temperature drops and the snow flies give the center frame of your old reliable Sioux (OH-13) the big look.

You know what happens when water collects in the hollow tube and it freezes? Pow!! The tube splits and your bird is in big trouble.

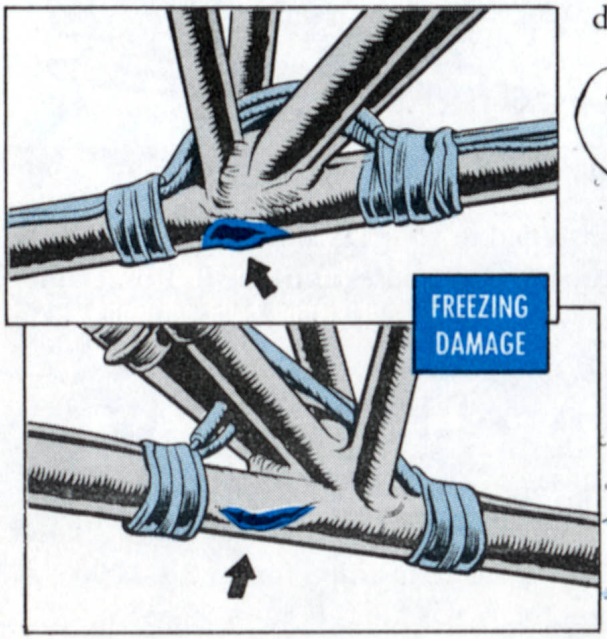
So, when you go over the frame look for any signs of corrosion which could mean you have an un-sealed frame.

If holes were drilled for attachment of fittings or brackets, focus on the retaining rivets.

A frame that's not sealed at the rivets will let moisture into the tubing. When a bird with an un-sealed frame has been on the scene as long as the Sioux has it's bound to collect water.

Be a doubting Thomas if you suspect the frame is faulty. Contact your support. They have X-ray, compressed air and other equipment to really give it a good going over.

To keep the frame bone-dry follow this poop in para 4-25 of TM 55-1520-204-20 (Jun 66). **Never,** but **Never,** drill any holes in the center frame.



AIR MOBILITY

COLD WEATHER LOOK . . .

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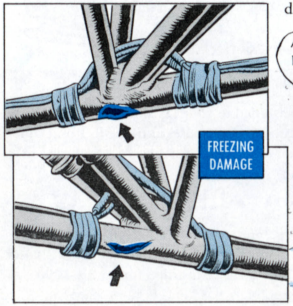


KEEP THE FLUID FLOWING

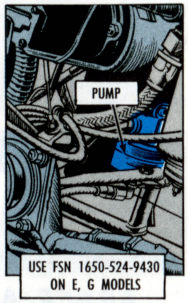
The only thing worse than low hydraulic pressure is none at all!!

Which is just what'll happen to your Sioux (OH-13E, G) if you put on a wrong replacement pump.

Pump, FSN 1650-945-3957, shown in Fig 125 of TM 55-1520-204-20P (Nov 68) rotates clockwise and is listed as a replacement for FSN 1650-524-9430 . . . 'taint so.

The E and G model engines have a counterclockwise accessory drive which means that only counterclockwise rotating pump, FSN 1650-524-9430, will deliver the fluid.

So, be sure "no substitute acceptable" goes on your pump requisition.



SAME WEAR LIMITS

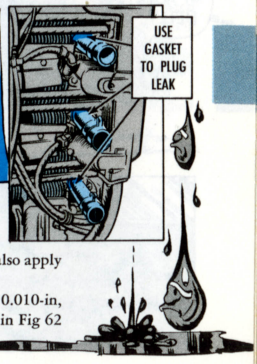
Dear Windy,

Para 5-71 of TM 55-1520-204-20 (Jun 66) calls for the exhaust manifold flange to be flat within 0.010-in on the O-435 engine. Also, no exhaust gas leakage is allowed.

Our Sioux (OH-13E) has an O-335 engine but the pub doesn't list any flange warpage or leakage poop.

Is it the same as for the O-435?

SP5 E.C.G.



Dear Specialist E.C.G.,

Right you are!

The exhaust manifold limits given for the O-435 also apply to your O-335 engine.

To plug a gas leak when flange warpage is within 0.010-in, use gasket, P/N 17545, FSN 2810-118-1734, listed in Fig 62 of TM 55-1520-204-20P (Nov 68).

Windy

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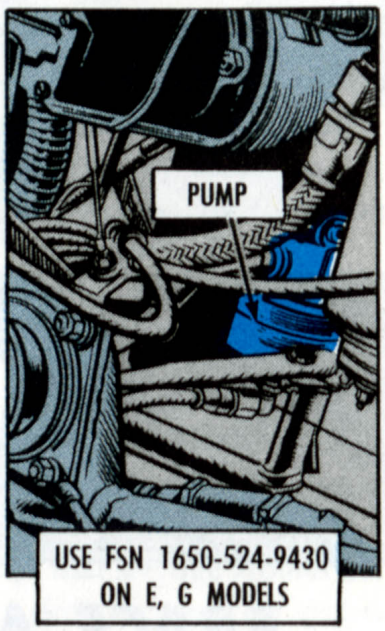

USE FSN 1650-524-9430 ON E, G MODELS

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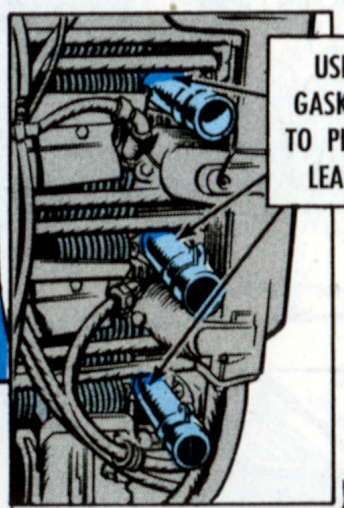

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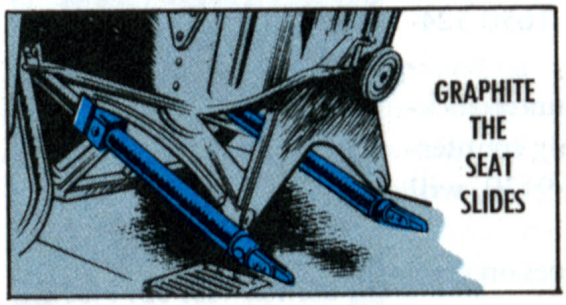
Windy

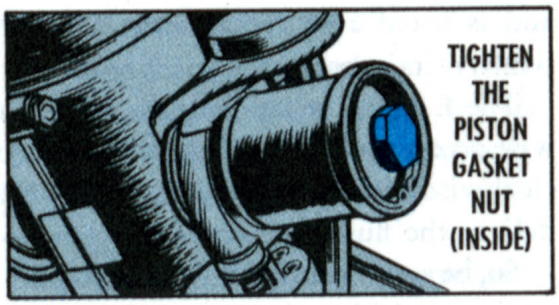
BEAVER GREASE

One good way to save wear, tear and damage to U-6A Beaver seat slides and bungee cords is to clean and graphite the seat slides every periodic.

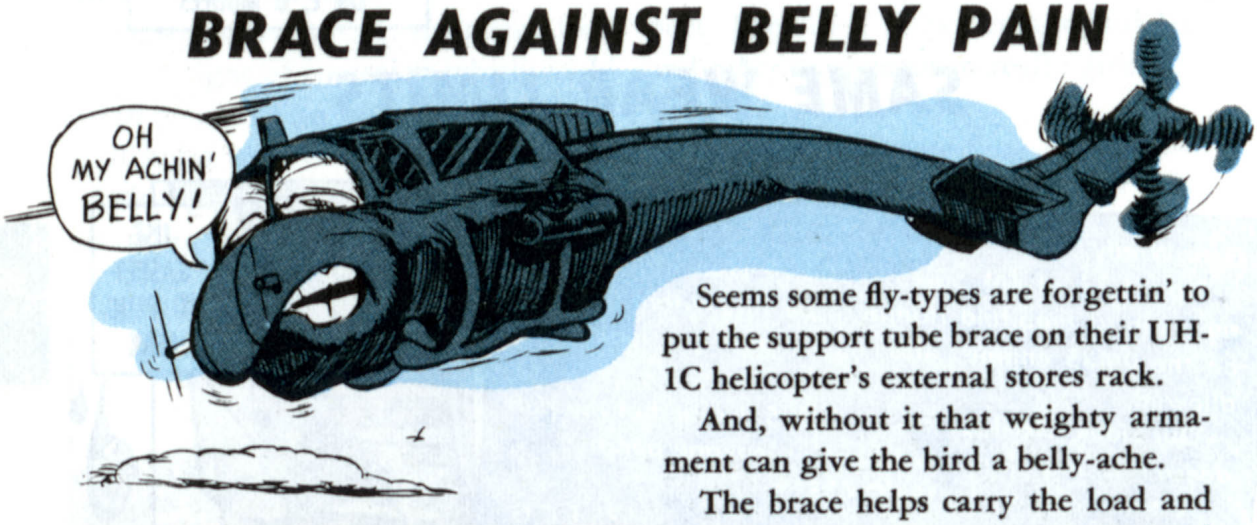
Just takes a jog of the memory cells and a few minutes time.

And, since we're on the lube kick, a simple tightening of the piston gasket nut is all you need to heal any prop oil leak or drip that develops.





BRACE AGAINST BELLY PAIN



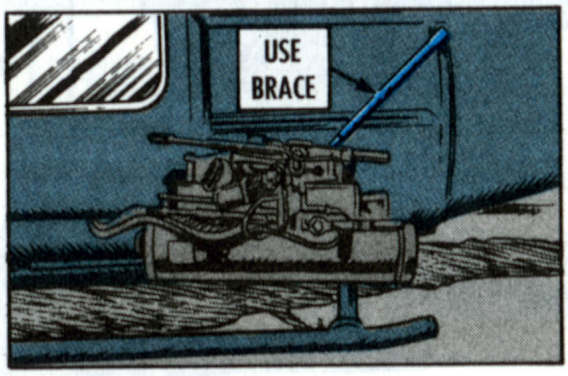
Seems some fly-types are forgettin' to put the support tube brace on their UH-1C helicopter's external stores rack.

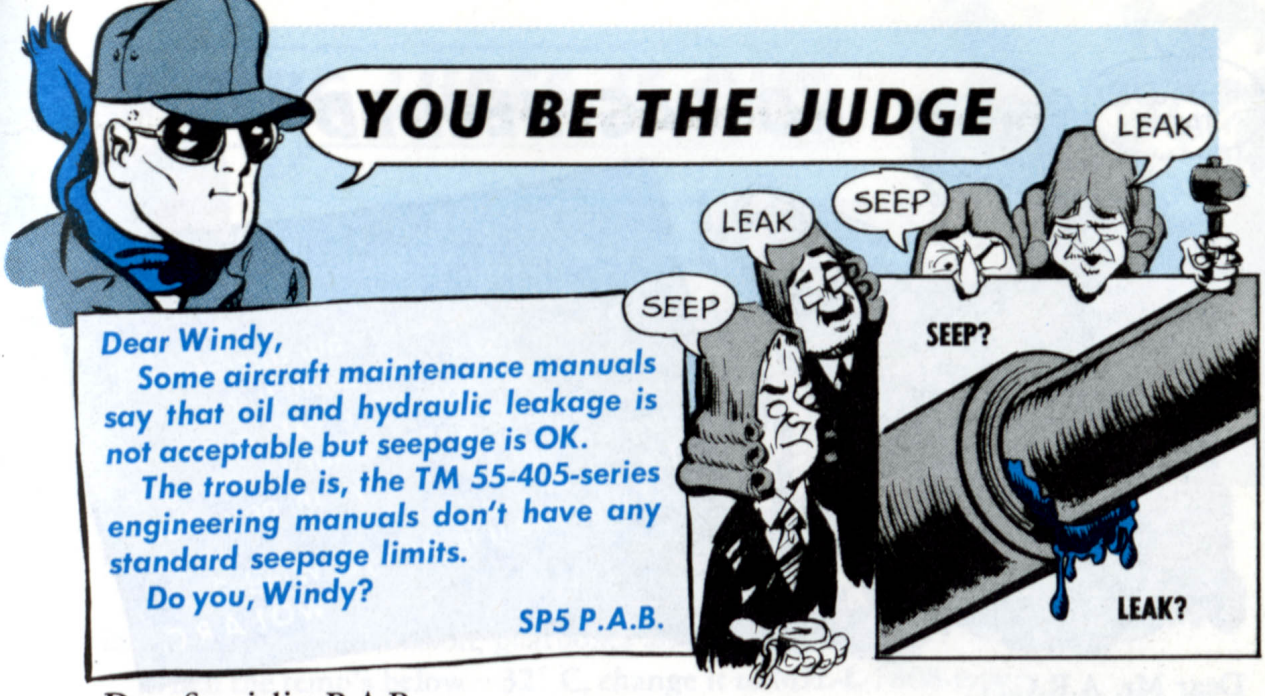
And, without it that weighty armament can give the bird a belly-ache.

The brace helps carry the load and keeps the rack from cracking the hard points.

So, when the armament is hooked up make sure the brace is in place on both sides of the chopper.

O'course, the brace should never be used for a step 'cause an Army-type is making himself ready for a mean mishap.





Dear Specialist P.A.B.,

You really know how to put a guy on the spot!!

A leak, of course, is a continuous flow. A seep is a now-and-then deal and limits are sometimes given in a maintenance pub.

Take the collective pitch control hydraulic cylinders on the Huey D and H Model. TM 55-1520-210-20 (May 69) para 6-63G says that seepage around the piston rod seals is permissible but should not exceed 1 drop for every 25 cycles.

When you consider that bird manufacturers use different engines, transmissions, gear boxes and hydraulic components it's nigh-on to impossible to come up with standard seepage limits.

The usage factor has a bearing on seepage. Idle birds with dry seals have been known to leak like a sieve when cranked up. Even contraction of a cold gear box can give up seepage while expansion of a heated gear box will seal the seep.

If you find yourself wiping up a little too often—or a sight gage goes from FULL to ADD OIL after every flight, chances are some seals need changing.

So, deciding when a drip—drip—drip has to be stopped is up to you, backed up by your maintenance officer.

Windy

ANALYZER OUT — TESTER IN

If you birdmen have an ignition analyzer collecting dust in Tool Set, Aircraft Organizational Maintenance, Set B or Set C, you can turn it in.

The analyzer, FSN 4920-930-3569, has been replaced by ignition coil tester, FSN 4920-111-0036, for use on recip engines. SC 4920-99-CL-A71 (4 Feb 69) has the new word.

Just like the analyzer, tho, the tester doesn't come with a new tool set. The word authorizing one has to come from the Overseas or CONARC commander.

NO TAG NEEDED

Dear Mr. A.R.C.,

The governing pub for tagging first aid kits and fire extinguishers in aircraft is TB 750-126 (May 67) on materiel condition tags and labels for aeronautical equipment.

Para 4h says that when serviceable items are placed in service the tag may be removed and destroyed **unless** the tag is required by technical pubs or directives to stay with the item until used or the condition of the item changes. Aircraft first aid kits and fire extinguishers are given as examples.

TB 55-1500-308-25 (Aug 67) put out by the Aviation Systems Command, required a tag for the first aid kit.

AVSCOM has never published anything calling for a tag on aircraft fire extinguishers.

'Course the purpose of a tag is to record inspections.

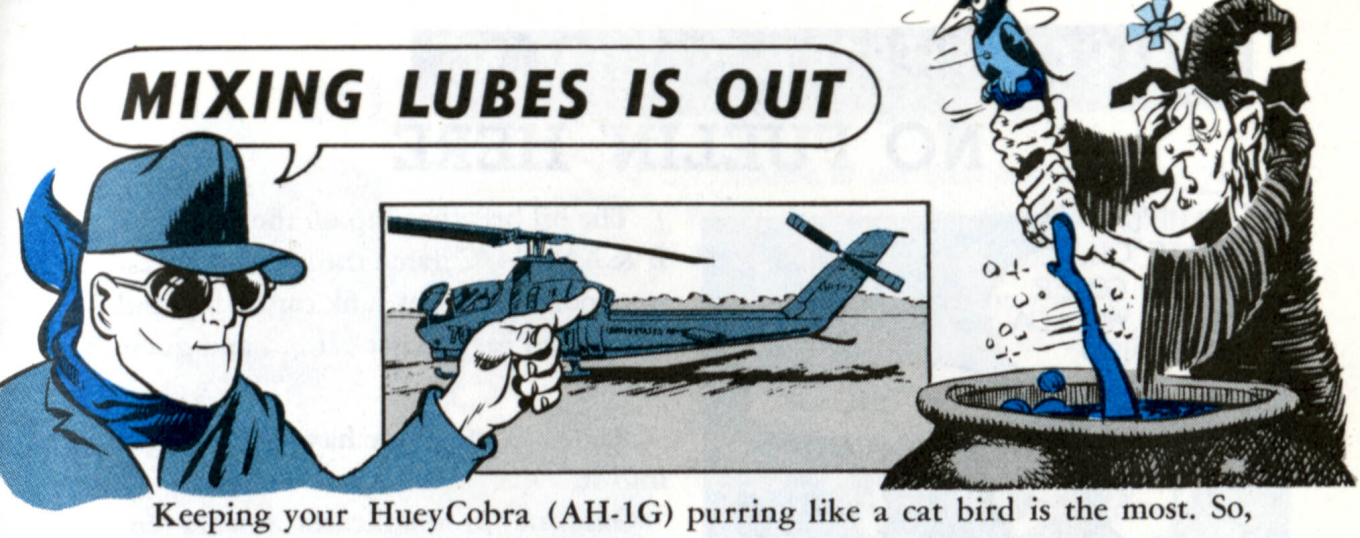
Para 152 of TM 55-405-3 (Jul 66) calls for a weight check of the CF3BR cylinder every six months and replacement if the weight loss is 4 ounces or more. This inspection is recorded on the log book DA Form 2408-18.

Windy

STOPS COVER CHAFING

Don't fret if your Huey or HueyCobra is suffering from a case of driveshaft cover chafing. Get rub strip, P/N 209-030-203-43, FSN 9330-851-5379, for the tail rotor driveshaft access cover. You want anti-chafe tape, P/N 549, FSN 8135-923-0591, for the vertical fin access cover.

MIXING LUBES IS OUT



Keeping your HueyCobra (AH-1G) purring like a cat bird is the most. So, leave off with the mixing of lubricants.

When the temp's −32° C (−25° F) or above, feed the bird MIL-L-23699 oil in the engine, transmission, gearboxes and rotor hubs.

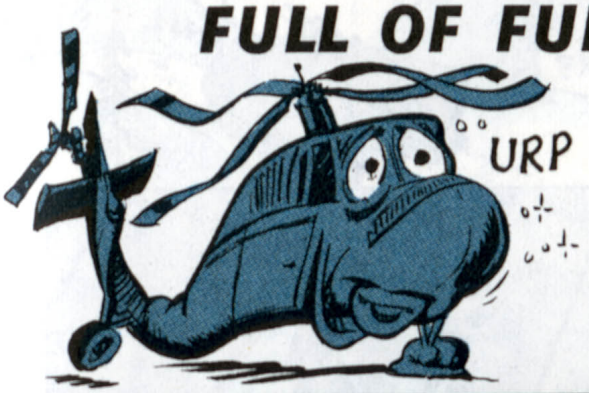
When the temp's below −32° C, change it to MIL-L-7808-type.

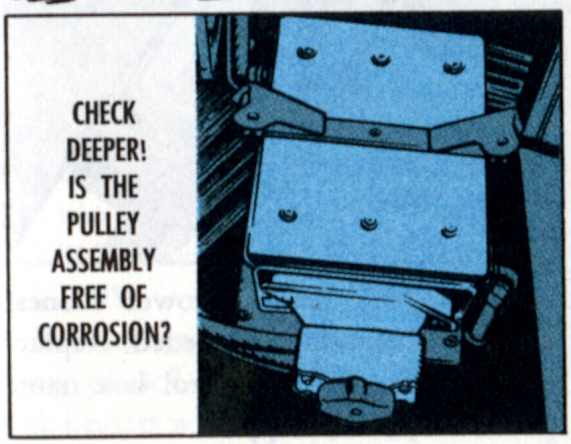
After making the necessary oil change, do like it says in the U.S. Army Aviation Systems Command TWX AMSAV-R-EOP-4-1339 (18 Apr 69) and change decals or stencils to read:

MIL-L-23699 oil ABOVE −32° C ambient temp
MIL-L-7808 oil BELOW −32° C ambient temp

CHOKING CHOCTAW

FULL OF FUEL— BUT OUT





A stuck fuel selector valve in the control pulley assembly for that Choctaw (CH-34) can run the bird outta gas faster than a run down a drag strip.

That's how it is when the assembly gets damaged from dripping BB-433 battery electrolyte.

During the Intermediate or Periodic when that powdery or crusty corrosion is spotted around the battery caps, whisk it away . . . then, look deeper into the bird, like, at the pulley assembly. 'Cause electrolyte seepage through the battery's vent hoses will botch 'er up.

When it's time to switch to the aft fuel tank the pitted pulley won't make it, leaving that CH-34 with a full-but-empty feeling.

NO FUELIN' HERE

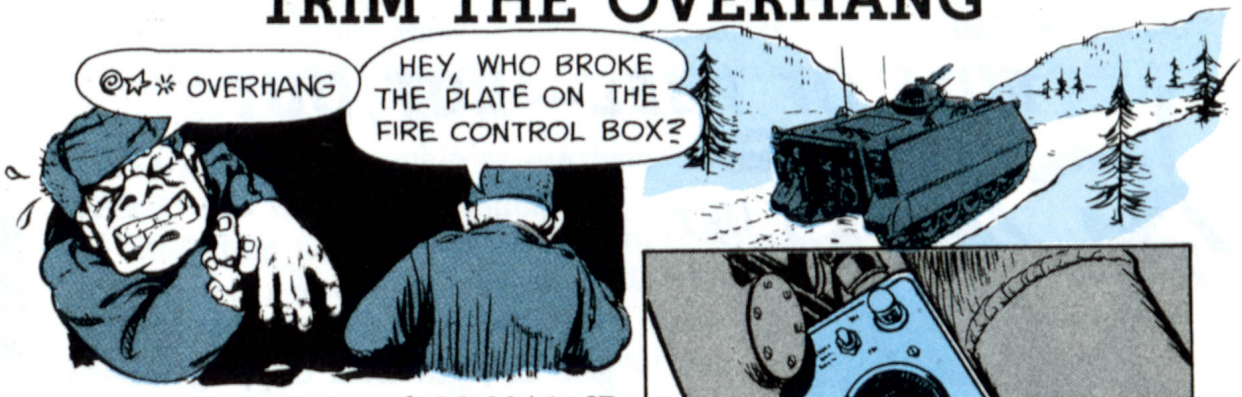
The oil breather cap on the AN-M4/B & AN-M4/C flame thrower compressors looks like a gas tank cap — big and round and easy to get off . . . and guess what?

Right! Some Joe's have poured gas into it.

Gasoline in crankcases smears engines. Conn rods fuse to crankshafts, engines freeze — and the whole bucket can go Ba-Roo-OO-OOM!

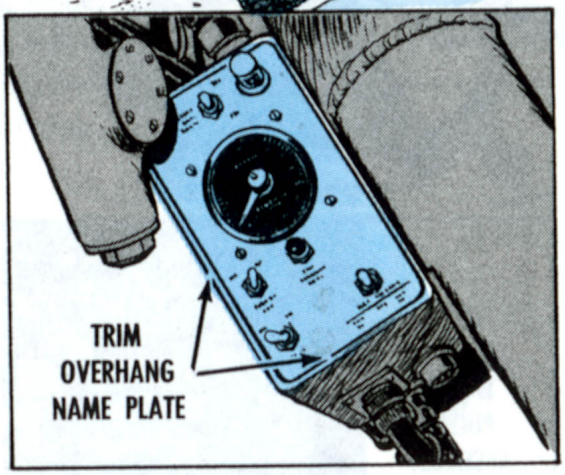
So, in white letters at least a half-inch high, paint "OIL" on the cap with white semi-gloss paint (TT-E-508). It'll keep somebody from fuelin' around the wrong hole.

TRIM THE OVERHANG



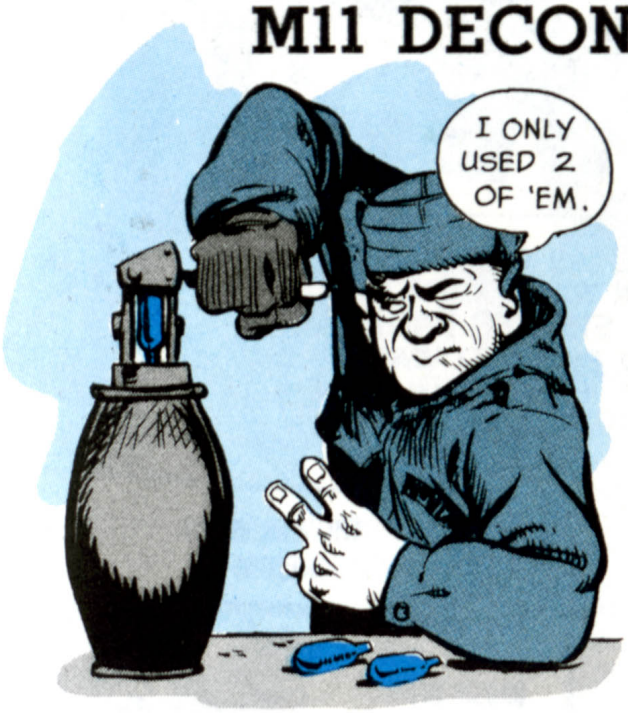
On some M132 and M132A1 SP flame throwers, there's a slight overhang on the name plate on the fire control box. Hooking the overhang can gash your clothes or hide, and it'll also damage the plate.

Some plates are made of light aluminum, others of plastic, so you can even things up easy enough by filing or cutting back the overhang. Just trim the plate back even with the sides of the box wherever there's overhang.



Check your flame thrower soonest and start trimming, if needed. Replacing a damaged fire control box name plate is a job for support.

M11 DECON CAUTION

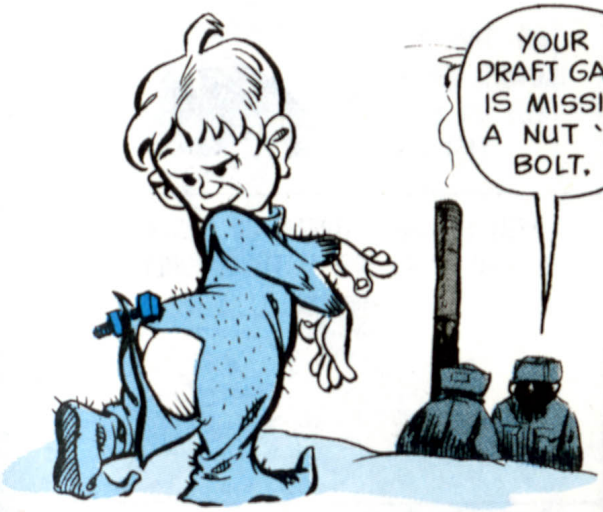


You're to use only one nitrogen cylinder to pressurize the M11 portable decon. That goes at all temps.

The warning note on page 8, and on the inside front cover of TM 3-4230-204-12 (Nov 68) mentions 2 cylinders for a load . . . but, that's not 2 cylinders back-to-back.

In cold weather (−10° F), for example, if one nitrogen cylinder doesn't empty the container, **then** you can repressurize the M11 with a second cylinder. But, using 2 cylinders back-to-back may deform the container.

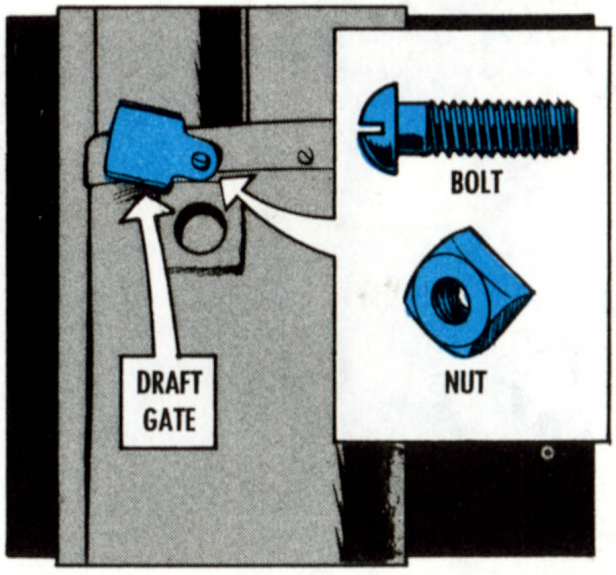
USE NUT AND BOLT



Dear Half-Mast,

We got some immersion heaters, FSN 4540-266-6835, without the stud and nut for the draft gate, FSN 4540-555-8530. Are there FSN's for these items so we can order them?

SFC D. H. F.



Dear Sergeant D. H. F.,

That stud and nut are no longer furnished with the draft gate and they do not have FSN's. As a substitute you can use a bolt, FSN 5305-012-0628, and a nut, FSN 5310-013-1395.

The heaters with draft gates are being phased out, to be replaced with heaters with cup-type lighters.

Half-Mast

ARMOR

THERE ARE TWO WAYS TO CLEAN YOUR ARMOR VEST **THE SHOWER BATH WAY...** AND BY **HAND WASH!** BUT IF THE VINYL IS PUNCTURED--TURN IT IN.

SHOWER BATH METHOD

BRUSH OFF MUD AND DRY DIRT FIRST

THEN TAKE YOUR CLOTHES OFF AND PUT ON YOUR VEST

NEXT GET IN A STREAM OR UNDER A SHOWER TO WET IT THOROUGHLY

NOW SOAP IT WELL AND RINSE

ARMOR VEST CARE

THERE ARE TWO WAYS TO CLEAN YOUR ARMOR VEST **THE SHOWER BATH WAY**... AND BY **HAND WASH!** BUT IF THE VINYL IS PUNCTURED--TURN IT IN.

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BRUSH OFF MUD AND DRY DIRT FIRST

THEN TAKE YOUR CLOTHES OFF AND PUT ON YOUR VEST

NEXT GET IN A STREAM OR UNDER A SHOWER TO WET IT THOROUGHLY

NOW SOAP IT WELL AND RINSE

FORE, AFT AND INSIDE OUT

NOW PUT ON VEST BACKWARDS AND DO LIKE BEFORE

THEN PUT IT ON INSIDE-OUT... SOAP AND RINSE FRONT AND BACK

AIR DRY IT... BUT NOT NEAR AN OPEN FIRE OR A HOT STOVE.

TO HAND WASH

REMOVE LACES

BRUSH OFF LOOSE DIRT WITH A SOFT BRUSH OR CLOTH

WASH OFF SPOTS WITH WARM WATER AND DETERGENT OR SOAP... RINSE

NO GAS OR SOLVENT EVER

DON'T FORGET TO WASH LACES

STORAGE

UNTIE LACES FRONT AND BACK

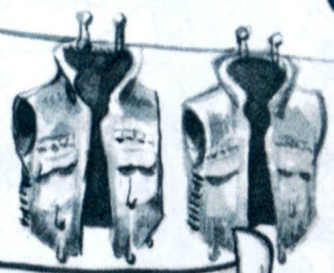
OPEN SIDE FLAPS

STORE IN BOX, CARTON OR OPEN BIN — INSIDE TENT OR BUILDING

TIPS

- When adjusting those side laces be sure you leave space for ventilation . . . and don't lace 'em too tight.
- Use those protective flaps to cover the opening under the side laces.
- If vinyl envelope around the ballistic filler is punctured — turn the vest in.

VEST CARE



FORE, AFT AND INSIDE OUT

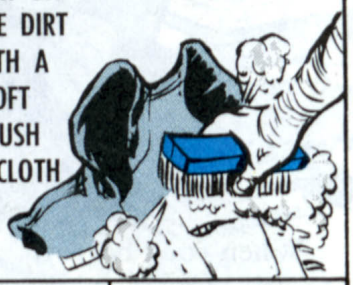
NOW PUT ON VEST BACKWARDS AND DO LIKE BEFORE

THEN PUT IT ON INSIDE-OUT . . . SOAP AND RINSE FRONT AND BACK

TO HAND WASH

REMOVE LACES

BRUSH OFF LOOSE DIRT WITH A SOFT BRUSH OR CLOTH



WASH OFF SPOTS WITH WARM WATER AND DETERGENT OR SOAP . . . RINSE

NO GAS OR SOLVENT EVER

DON'T FORGET TO WASH LACES

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When you "borrow" a pub from a piece of equipment, you could cause it to be deadlined for lack of maintenance information or lack of parts.

Each piece of equipment is supposed to have one copy of the equipment manual shipped with it. Sometimes it's a TM, and sometimes it's a manufacturer's manual.

Those manufacturer's manuals are often printed in just the number needed to go with the equipment—and no spares. So, you can't order another copy from the St. Louis AG Pubs Center like you do your Army TM's.

You may get several pieces of equipment that are alike and you may not need all of the manuals. Store the extras so you'll know where they are, because you turn in the manuals when you exchange the equipment for other models.

When you send your equipment to support for repair, lend them a copy of the manual too, but keep track of it.

If you need a manufacturer's manual for your equipment, better order a copy.

MANUFACTURER'S PUBS

Here're the addresses you use to ask for manufacturer's manuals on your equipment—if there're no Army TM's.

Typical Equipment

Generators
Compressors
Tractors
Cranes
Watercraft
Refrigeration
Air Conditioning

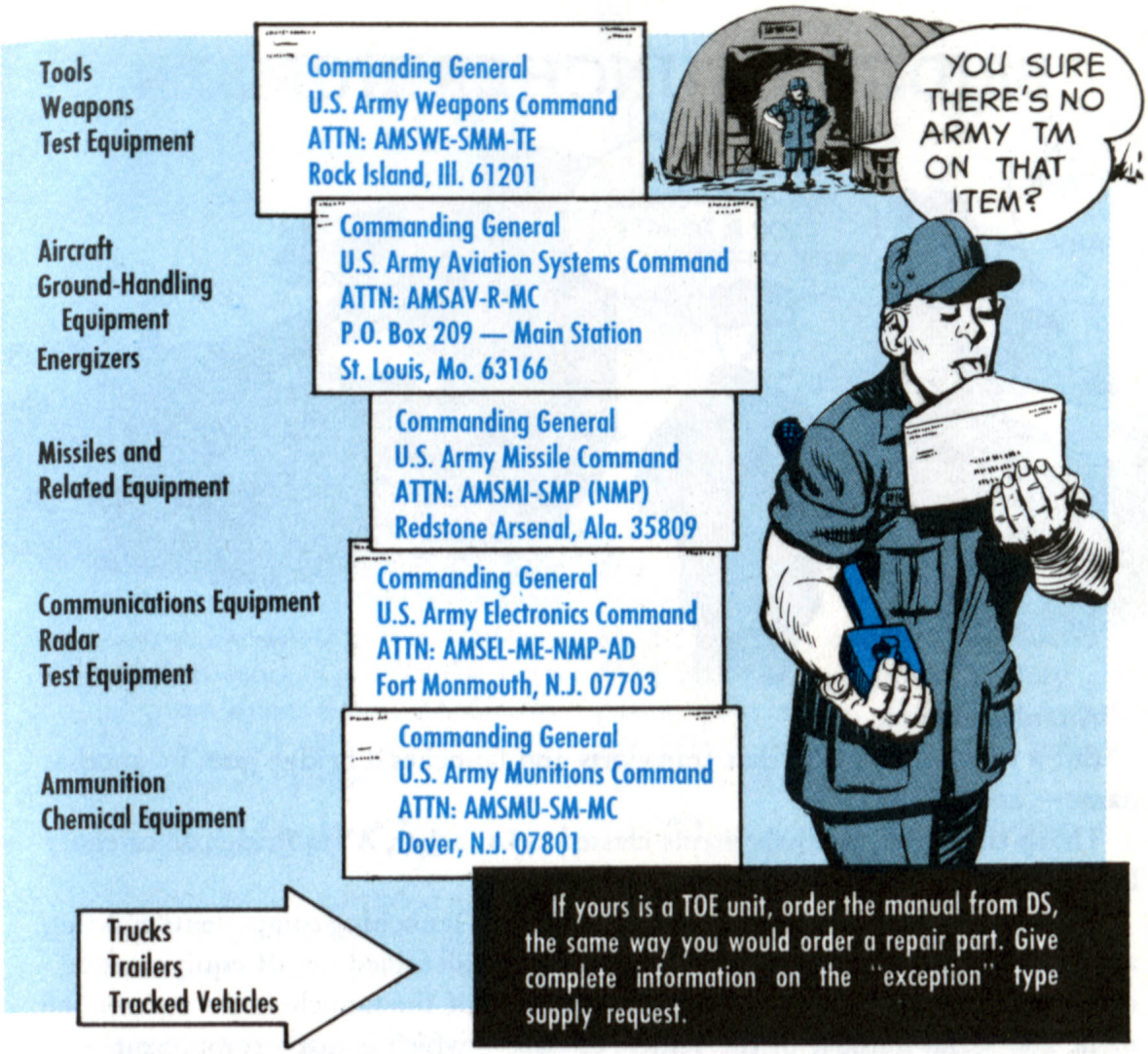
Order From:

DEPARTMENT OF THE ARMY

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY

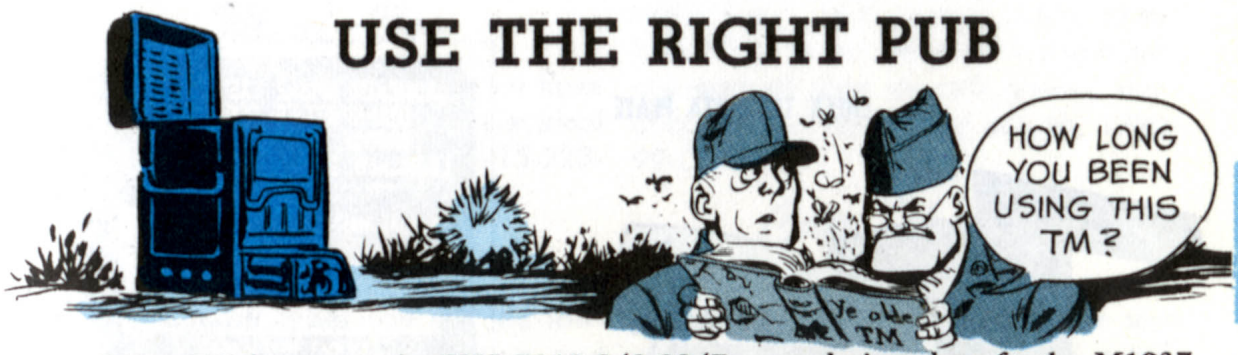
OFFICIAL BUSINESS

Commanding General
U.S. Army Mobility Equipment Command
ATTN: AMSME-RTR-R
4300 Goodfellow Boulevard
St. Louis, Mo. 63120



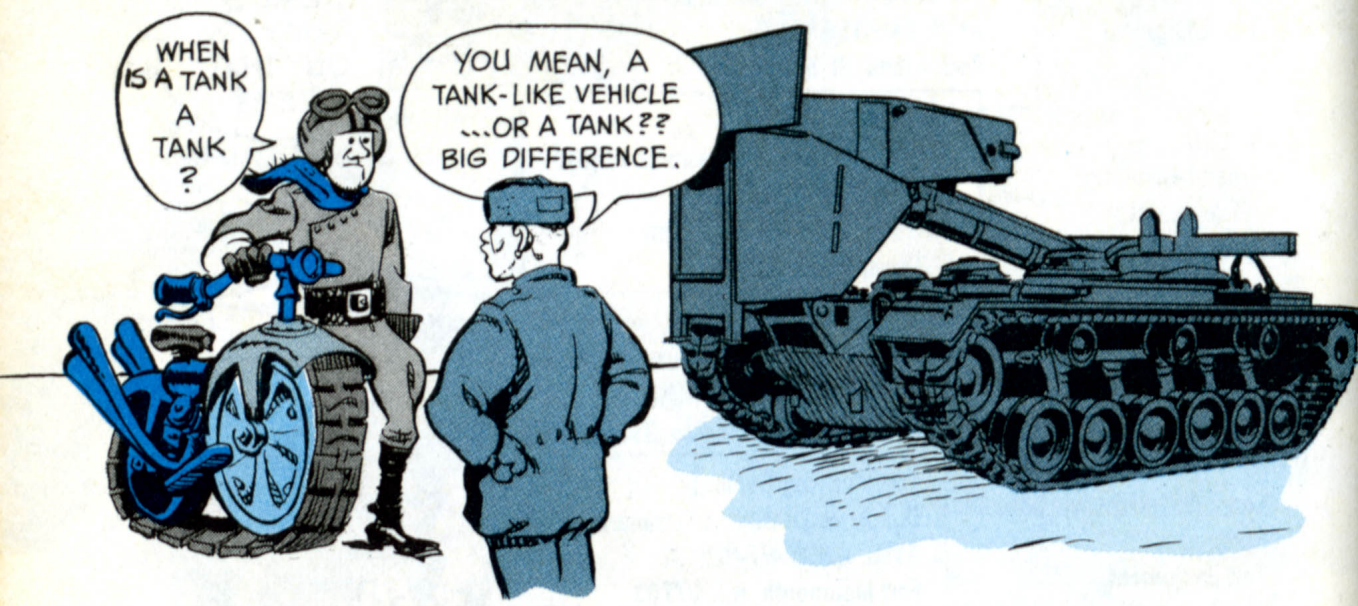
Check DA Pamphlet 310-4, Tech Pubs Index first to be sure there's no Army TM on your equipment. If not, fire off a request.

USE THE RIGHT PUB



Your M2 burner unit, FSN 7310-842-9247, was designed to fit the M1937 range cabinet or the M1959 cabinet. But when you're ordering parts for your M2 burner, make sure you use TM 10-7360-204-12 (Feb 68). The parts for the old type burner (the one with the three valves in a row) are not interchangeable with the M2 burner, and neither are the operating instructions. So if you have an M2 burner, stick to your TM dated Feb 68.

BRIDGE LAUNCHER NUMBER



A tank is a tank.

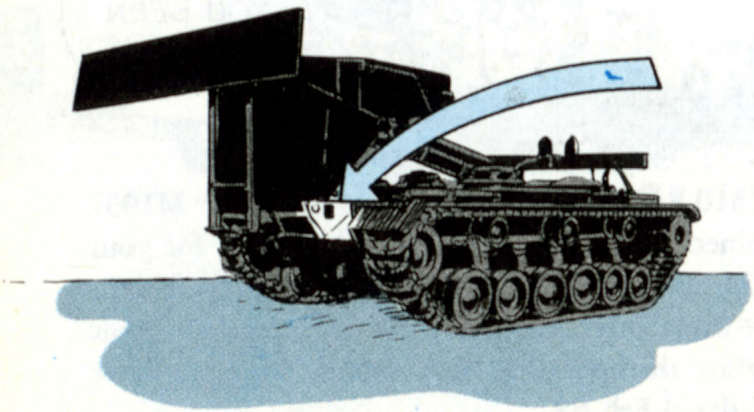
But a tank-like vehicle that transports and launches a bridge goes by another name—and number.

That's the story on all the items classed as Launcher, AVL, Bridge on category line 720310 in TM 38-750.

The tracked vehicle chassis plus hydraulic and launching components make up a bridge launcher. And the launcher should be identified on all equipment records and reports by the name and serial number of the launcher. Do not use the name and serial number of the vehicle chassis—which is just a component—or the USA registration number.

The launcher serial number is on a data plate at the left side of the boom mount. Make sure its DA forms say so in the serial number blocks.

CHECK THE DATA PLATE



Connie Rodd's BRIEFS

Number Right?

To prevent important TAERS info from going down the drain make sure your aircraft's serial number on the side of the fuselage, in col b of the DA Form 1352 and in block 4 of the DA Form 2408-8 is the same. If not, DA Cir No. 750-31 (4 Sep 69) will clue you on how to get the correct number.

Inhibitor Tip

Remember to use corrosion inhibitor FSN 6850-753-4967 when you add antifreeze (ethylene glycol) to your equipment's cooling system. The only time you can skip the inhibitor is when your equipment is protected with arctic grade antifreeze. Para 5 of TB 750-651 (Nov 68) has the word.

Mini-Box

Your vehicle-mounted radio set have a mini-box MX-7778(A)/GRC electrical transient suppressor? TM 11-5915-223-12 (Jan 69) has the PM story.

Get The Latest

You aircraft types can get the low-down on repairman MOS structure, and lots more, by running your peepers over Ch 2 (4 Apr 69) to FM 1-10 on Army aviation organizational maintenance. Don't miss it!

Battery Twosome

Battery choices for your AN/PSM-6A and -6B multimeter got you puzzled? What you need is 1 BA-1326 (FSN 6135-577-8309) and 1 BA-1328 (FSN 6135-274-4035) drop-in battery to power your meter. The plain model, AN/PSM-6, takes 1 BA-1085 battery, FSN 6135-295-2613, soldered in.

Personalized PM

Aircrewmen — take care of your armor vest and it'll take care of you. Maintain the body armor according to the info in DA Pam 750-12 (10 Mar 69).

FSN To See By

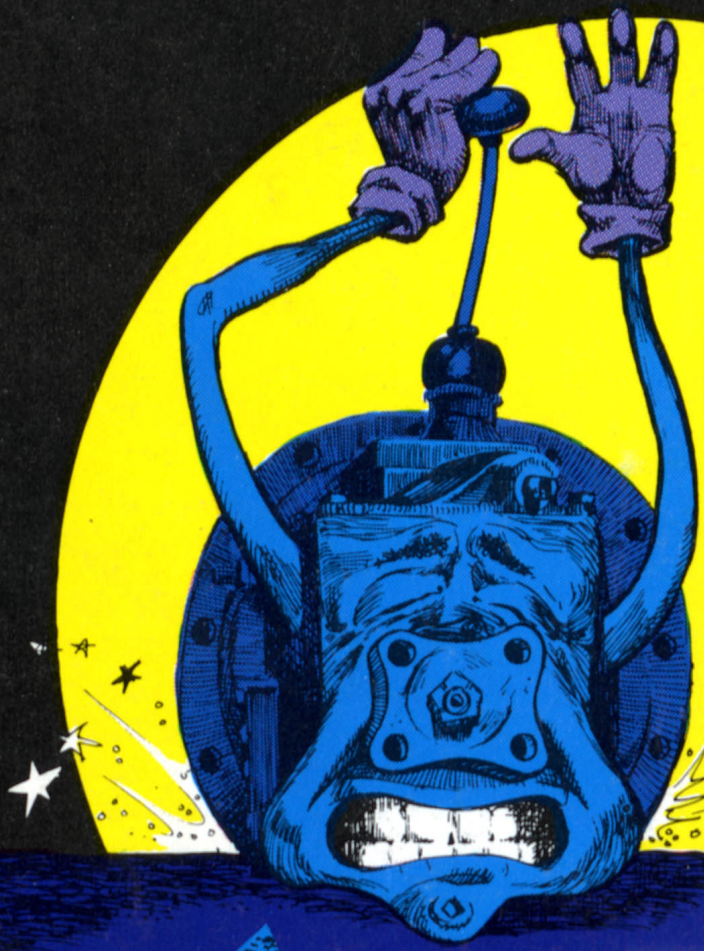
To replace light bulbs in your electric floodlight sets, FSN 6230-299-5879, order lamp, incandescent, FSN 6240-155-7772. Those electric floodlight sets are part of your aircraft ground handling and servicing shop set, SC 1730-99-CL-A04.

Cap The Oil

When you air types pack one of those T-53 engine fuel controls, be sure you use high-pressure caps to retain the preservative oil. Aluminum foil, tape or paper won't hack it. Bird organizational maintenance pubs tell you where to use the caps.

Would You Stake Your Life right now on the Condition of Your Equipment?

WHEN REVERSING DIRECTION... STOP BEFORE YOU SHIFT GEARS



Prevent Gutted Transmissions